

FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS

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Founder and Editor : STANLEY SPOONER

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"FLIGHT" PHOTOGRAPHS

To those desirous of obtaining copies of "Flight" photographs, these can be supplied, enlarged or otherwise, upon application to Photo. Department, 36, Great Queen Street, W.C.2.

DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1928

Aug. 27-31 U.S. National Baby 'Plane Meeting, Milwaukee

Sept. 10-21 French International Light 'Plane Meeting at Orly

Oct. 7-28 International Aircraft Exhibition, Berlin

Oct. 8 Aero Golfing Soc.—Team Match v. Stage G.C.

Oct. 24 Aero Golfing Soc.—"Cellon" Challenge Cup

1929

Oct. 31 Guggenheim Safe-Aircraft Competition Closes

EDITORIAL COMMENT



ALTHOUGH by this time it is likely that the Dornier "Wal" has gone to the bottom (at least for the sake of shipping it is to be hoped that it has) Courtney's adventure has not, like so many other unsuccessful Atlantic flights, been without its use, nor without its lessons. FLIGHT has previously referred to Courtney's attempts and incidentally has regretted his using a German flying-boat, for which latter FLIGHT has been "called to task". We need not again bring up this subject except to use it as proof that in what we are about to say we cannot be accused of being biased in favour of this particular flight. But apart for the moment from any question as to whether such an attempt by a British pilot using a German machine and British engines was likely to help *British* aviation, the adventure has had its useful side, useful not only to this country but to aviation in general the world over.

With the actual reasons which caused Courtney to descend we are not here concerned. These cannot be discussed until fuller information is available. Suffice it for the moment that the fact is accepted that a fire broke out "in the engine room." As far as can be gathered, this occurred round about midnight. One can imagine the harrowing experience through which the crew went, and one cannot but sympathise very sincerely with them. Below them the Great Atlantic. All around them darkness. How close the nearest surface vessel?

Presumably by the flare of the fire on board, Courtney succeeded in alighting safely. While gliding down (one may, of course, assume that the first thing that was done was to switch off the engines) the S O S was sent out. Fortunately it was picked up at once and re-transmitted to the Atlantic in general, with the result that several liners diverted their course towards the point indicated in the distress signal.

It is now common knowledge that it fell to the *Minnewaska* to pick up Courtney and his crew, and although the captain of that vessel is reported to have said that only the fine weather and excellent

visibility enabled them to find the "Wal," aviation folk may take heart from the fact that the machine was found.

In the first place, it may reasonably be assumed that wireless saved the aviators. Without it it is extremely doubtful whether the machine could have survived until a vessel chanced to be near enough to see it. A flying-boat may spend many hours, and even days, on the sea if no damage has been sustained. There have been examples of this in the past. But the Dornier "Wal" probably was damaged by the fire on board, and thus could not be expected to survive indefinitely.

Thus we may claim to have had one more demonstration of the value of wireless. As FLIGHT has been a consistent advocate of making wireless compulsory on machines engaged upon such flights, we are naturally gratified to have had our contention as to its use so thoroughly proved. Incidentally, we believe we are correct in assuming that were the authorities in this country to insist upon wireless being carried, many of the unsuccessful flights would not have started, as the extra weight would then have put the machines outside the airworthiness certificate. However, that is by the way. The great point is that we have here a concrete case of wireless having definitely proved its worth.

Courtney's unpremeditated demonstration has further shown that the flying-boat—or, more broadly, the seaplane—is the type for such flights. Had he and his companions been in a landplane it is fairly certain that they would not have been rescued. Granted that the S.O.S. was sent out and picked up, the time interval between this and the actual location of the machine by the *Minnewaska* indicates that no landplane could have floated for a sufficient time to enable the rescuers to reach it. Admittedly the two Polish aviators were picked up, but that was merely because they were lucky enough to find a vessel and alight close to it. Had they alighted where Courtney did, they would certainly not have been picked up. Our claim that the seaplane is the logical type has thus been demonstrated in a most practical manner.



Courtney's Atlantic Attempt

CAPT. F. COURTNEY'S second attempt to cross the Atlantic from Europe has failed. He had been preparing and waiting for many months this year, as he did on his first attempt. In the Dornier-Wal flying-boat he left Lisbon for the first stage to the Azores on June 28. There followed considerable delay at the Azores, and then an attempt to continue was made on July 9, but after flying 350 miles on the course towards Halifax, Nova Scotia, he was obliged to return. On August 1 another start was made at 8 p.m. (B.S.T.). When 500 miles beyond the Azores an urgent S.O.S. wireless message was transmitted from the machine and a forced landing made owing to an outbreak of fire in the engine nacelle. Many Atlantic liners picked up the message and hastened to the rescue. The *President Hayes* reached the spot indicated, but failed to find trace of the flying-boat. Meanwhile another liner, the *Minnewaska*, widened the area of search after also failing to sight the machine, and was successful. The crew was picked up none the worse for the adventure, but the machine was abandoned, although, apart from the effect of fire in the engines, which were in tandem above the wing, it was quite seaworthy and had spent the many hours adrift without suffering much damage. In fact, Capt. Courtney is reported to have said that it will probably be washed up intact on the Spanish coast. A later message indicates that it has been found by another ship, but whether it is being salvaged is not stated. The remainder of the crew were Mr. E. B. Hosmer, passenger, the son of a Canadian millionaire, Mr. F. Pierce (mechanic),

By alighting successfully in the open sea and in the middle of the night, Courtney proved that there is cause to hope that some day it will become feasible to operate seaplane services by night as well as by day, and that knowledge alone is of the very greatest value, not least to the British Empire.

In this week's issue of FLIGHT we publish the official log of a flight of a very different nature, but which also proves beyond a doubt the capabilities of the flying-boat. We are referring to the Far East cruise by four Supermarine "Southampton-Napier" flying-boats under the command of Group-Capt. Cave-Browne-Cave. The four machines have now reached Sydney, and doubtless in due course the official log of the Singapore-Sydney stage will be issued. In the meantime, there is much cause for satisfaction in the log which we publish this week, and which covers the stage from Karachi to Singapore.

Of serious troubles there appear to have been practically none, either with machines or engines. The only three thought worth mentioning are: heavy deposits of barnacles on the hulls of all machines; a leak in the water system of one engine out of the eight, and the breaking of an eyebolt on one of the rudders. Truly not a bad record for 9,434 nautical miles, or 37,736 machine-miles. The statement that at no time have the metal hulls leaked is also distinctly encouraging.

The speed generally appears to have been round about 70 knots, or about 86 land miles per hour, although the average for the Karachi-Singapore stage is only 46 knots, or 53 m.p.h. (85.4 kms./hr) having been reduced by one or two sections being affected by adverse winds. However, even the speed of 46 knots *made good* is very valuable because it shows what could reasonably be expected if one were operating a commercial service. If night flying becomes possible, the speed made good, based upon lapsed time and not on flying time, should be very useful indeed.

Altogether, the advocates of the flying-boat type of machine have cause to be optimistic in view of recent happenings.

and Mr. H. Gilmour (wireless operator). They were taken to New York on the *Minnewaska* and received a warm welcome by the Mayor and other city officials. The Marconi Wireless Telegraph Co., London, received a telegram from Courtney stating, "Rescue entirely due to Marconi wireless." The Marconi apparatus carried to such good purpose was similar to that equipped on all Imperial Airways passenger machines. It has a normal range of about 200 miles in flight and includes arrangements for emergency transmission in the event of a forced landing. The range on the water would be between 70 and 100 miles, and the power available sufficient for messages at intervals during 24 hours.

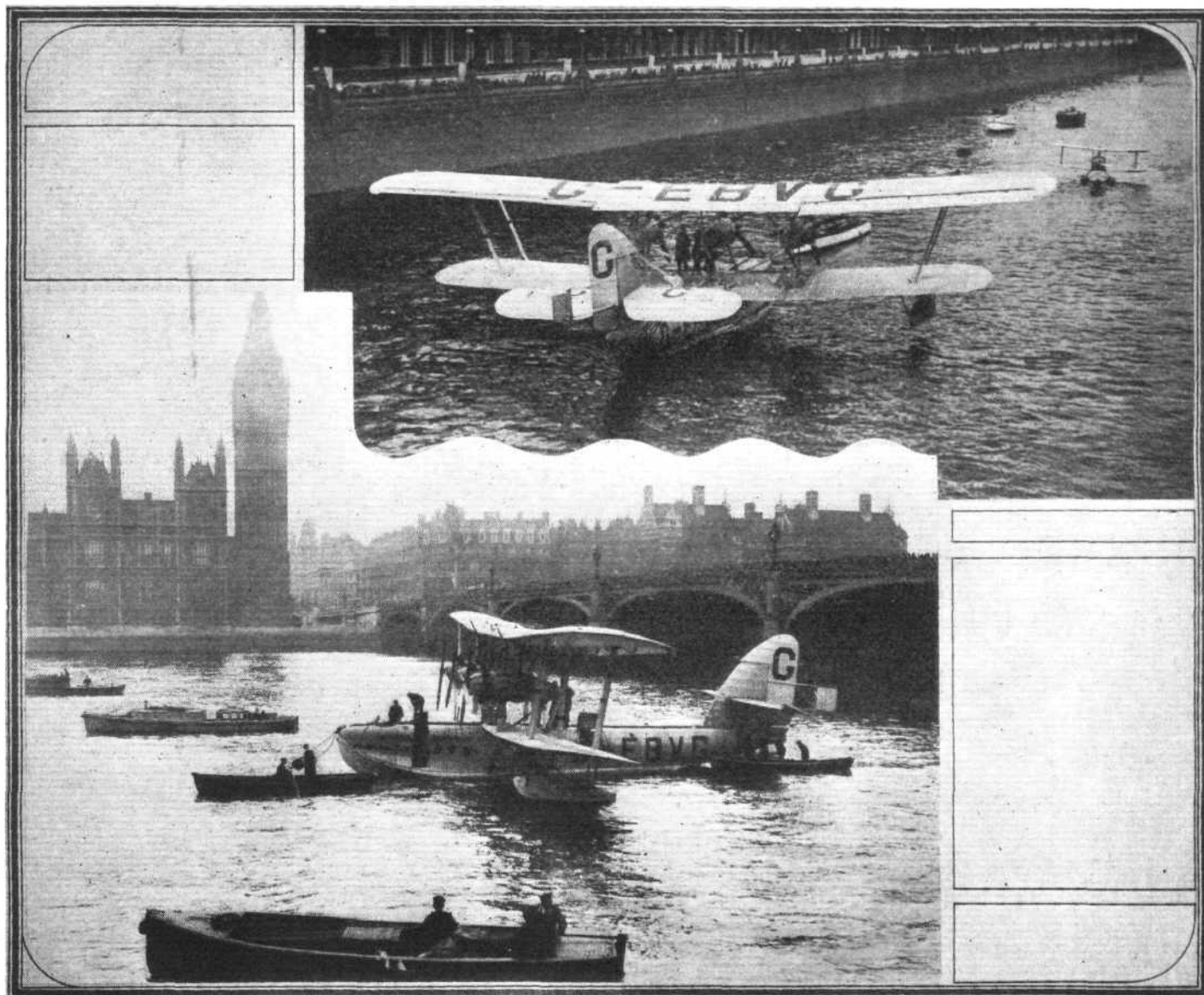
A New British Light 'Plane Engine

A NEW engine has recently been produced by A.B.C. Motors, Ltd., of Walton-on-Thames, and has just passed the Air Ministry type tests. Known as the "Hornet," the new engine is a four-cylinder air-cooled of unusual arrangement. It develops a power of 75 h.p., at the normal speed of 1,875 r.p.m., and has a very low fuel consumption. Owing to the arrangement of the cylinders, the engine runs remarkably smoothly and without vibration.

Another African Survey

AN air tour of a possible African air line to discover whether British enterprise can establish aerial communications before other countries between Africa and Europe is about to be carried out by Capt. F. E. Guest, M.P., on his Junkers all-metal single-engined monoplane. The pilot will probably be Flight-Lieut. the Hon. J. H. B. Rodney, a nephew of Capt. Guest.

THE EMPIRE FLYING-BOAT AT WESTMINSTER

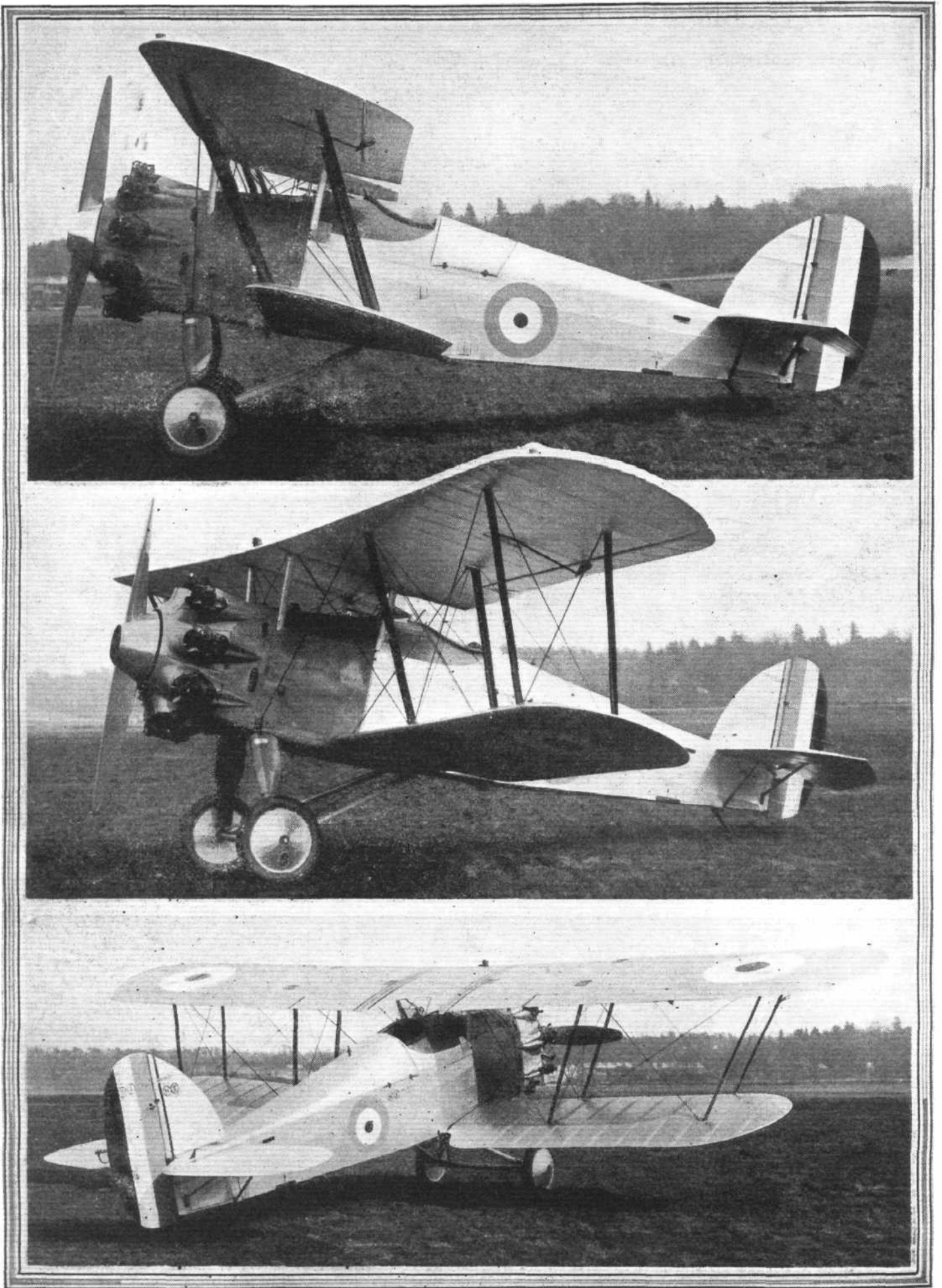


["FLIGHT" Photographs]

One of the sights of London last week was the all-metal Short "Calcutta" flying-boat of Imperial Airways, which, piloted by Mr. Lankester Parker, and with Mr. Oswald Short on board, flew from Rochester on August 1 and alighted on the Thames above Lambeth Bridge. It was moored opposite the Houses of Parliament, and later a large number of members, including Sir Samuel Hoare, were taken out to the flying-boat and made a thorough inspection of this latest example of modern transport. Large

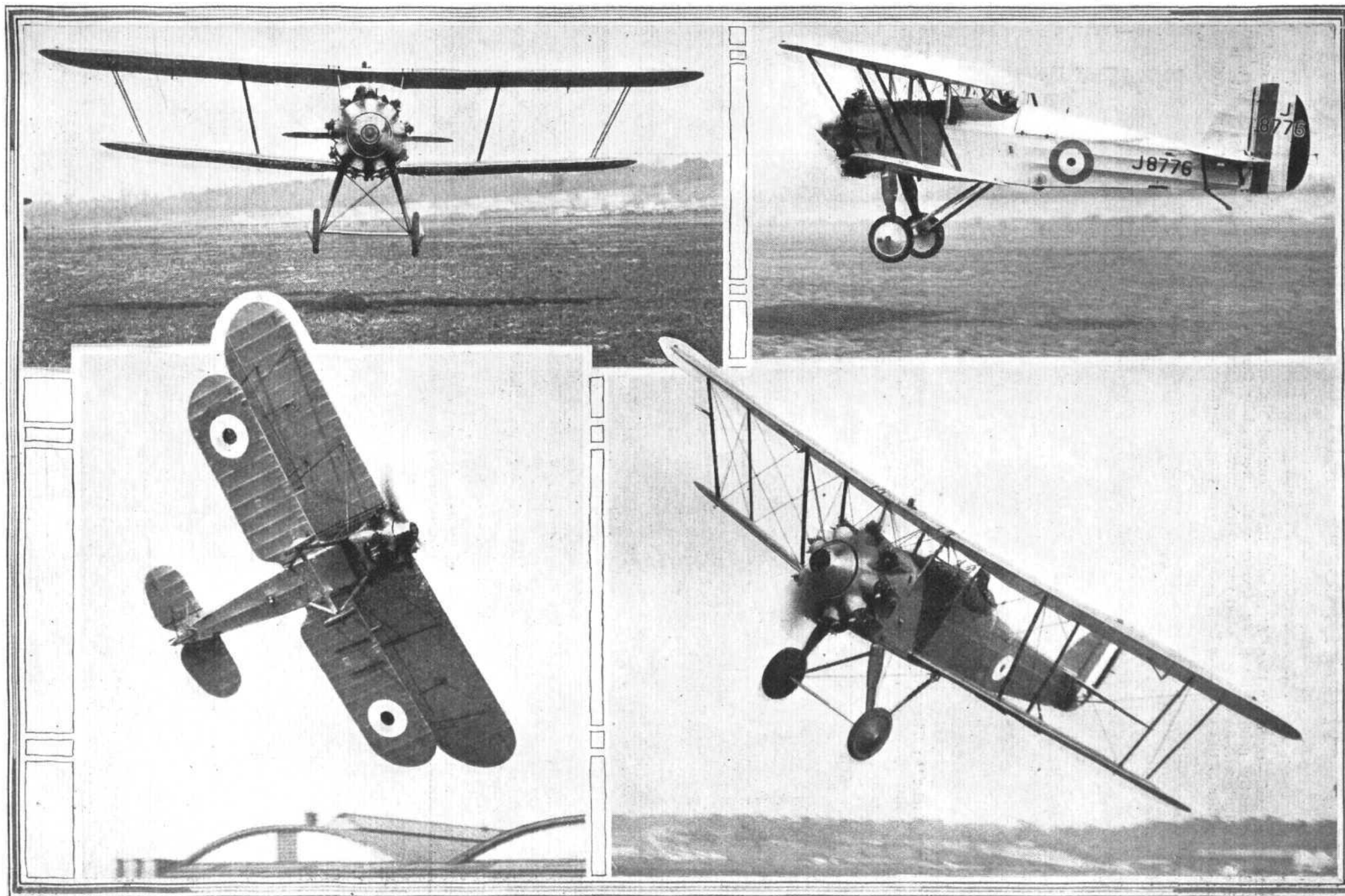


crowds had gathered on the embankment and the bridge to see the "Calcutta," which continued to attract sightseers during the several days it was moored on the water. Shortly after its arrival at Westminster, Col. the Master of Sempill arrived on a Blackburn "Bluebird" seaplane, which provided a striking contrast when moored next to the "Calcutta" as shown in our top illustration. The centre picture shows another view of the "Calcutta" with "Big Ben" in the background, while the lower picture is a "close-up" of the "Bluebird." The "Calcutta," which is to be used on the Southampton-Channel Islands route, is fitted with three Bristol "Jupiter" engines, and was described in "Flight" for January 6, 1927.



[“FLIGHT” Photographs]

A MODERN SINGLE-SEATER FIGHTER : The Hawker “Hawfinch,” Bristol Series VII “Jupiter” engine, incorporates several unusual features. In spite of its diminutive size, its biplane wings show two-bay bracing. The small lower plane, pronounced stagger, and low placing of the top plane result in an excellent view, coupled with a very rigid wing structure. These three views give a good idea of the general lay-out.



["FLIGHT" Photographs]

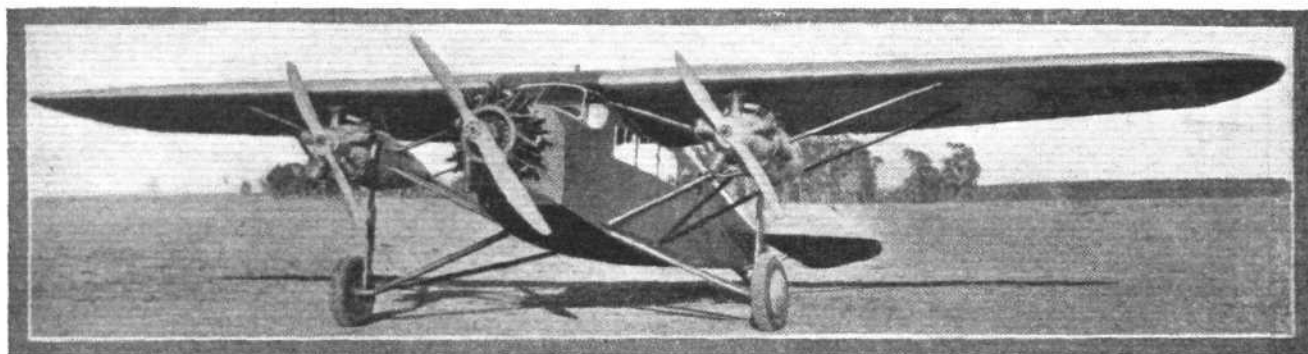
THE HAWKER "HAWFINCH" IN FLIGHT : These four views from various angles give some idea of the manœuvrability of the machine. The front view is a very remarkable picture, and shows good "team work" between our photographer and Mr. Bulman, Hawker's Chief Test Pilot.

THE BACH "AIR YACHT"

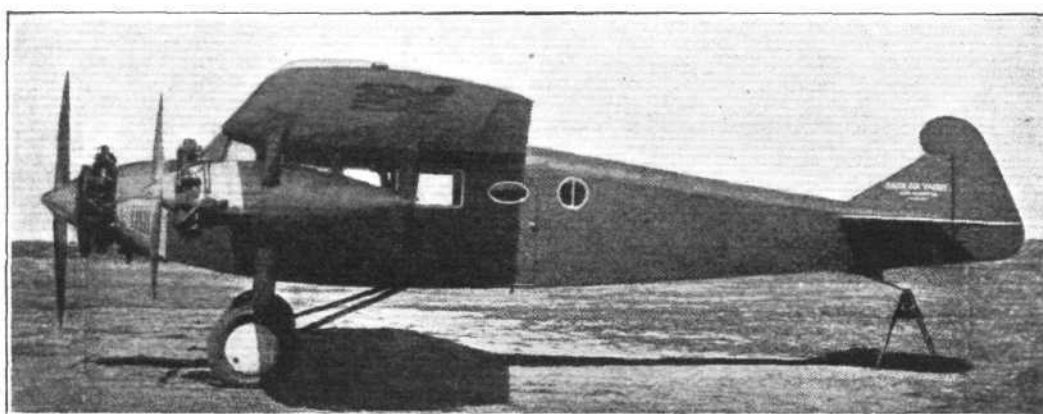
An American Three-Engined Monoplane

MULTI-ENGINED aircraft—especially those fitted with three engines—are apparently gaining increasing favour with American aircraft designers, for during the last few months a number of machines of this class have been produced by

engined high-wing monoplane—is the Bach "Air Yacht," produced by the Bach Aircraft Co., of Santa Monica, California, and described below. The Bach "Air Yacht" is a ten-place cabin machine designed to meet the requirements



The Bach "Air Yacht": Three-quarter front view of an American three-engined commercial monoplane. The centre engine is a nine-cylindered, 250 h.p. Waterman air-cooled radial, while the wing engines are five-cylindered, 100 h.p. Kinner radials.



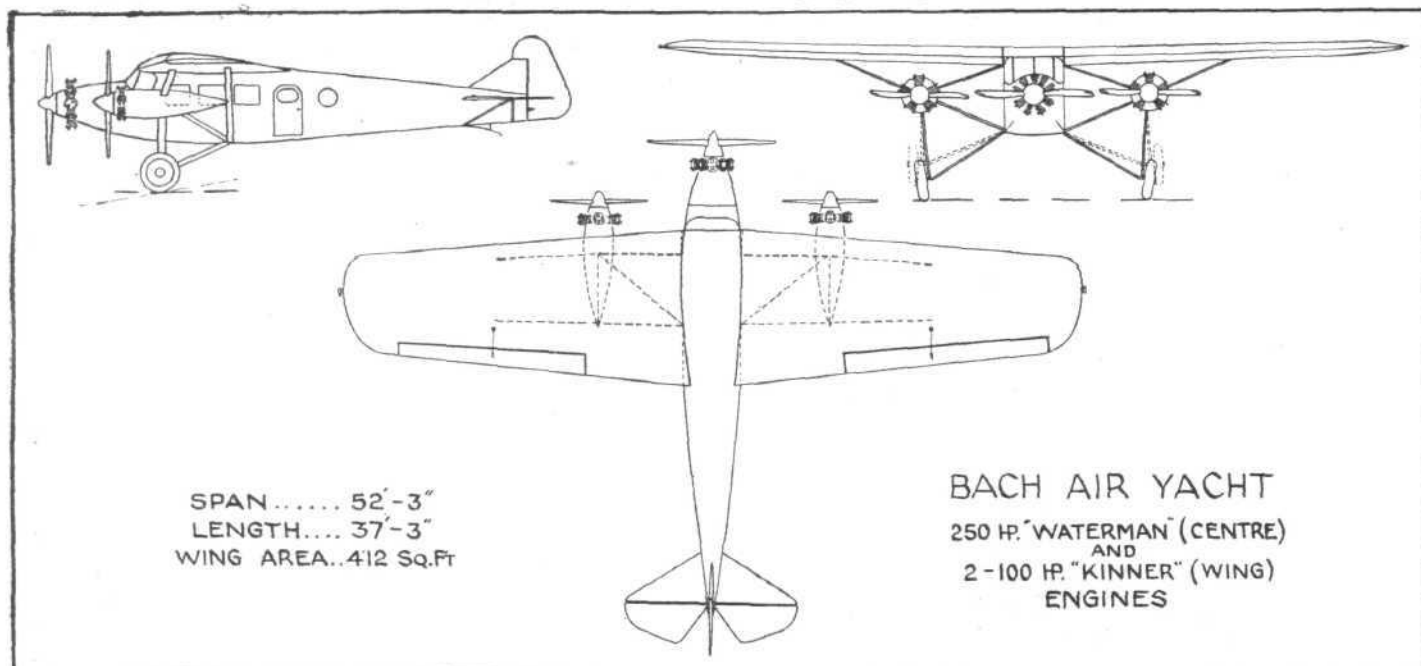
THE BACH "AIR YACHT": Side view. The cabin accommodates eight passengers.

various firms. In the majority of cases, also, the type of machine adopted is the high-wing cabin monoplane, which is very much in fashion just now, not only in America, but on this side of the Atlantic as well.

A recent American machine of this class—the three-

engined high-wing monoplane, and although following the lines of the popular type referred to above, it possesses several distinctive characteristics of its own.

It is, it is claimed, particularly suitable for the demands of airways passenger service—its wide-track landing gear of



SPAN..... 52'-3"
LENGTH.... 37'-3"
WING AREA.. 412 Sq.Ft

BACH AIR YACHT
250 H.P. "WATERMAN" (CENTRE)
AND
2-100 H.P. "KINNER" (WING)
ENGINES

THE BACH "AIR YACHT": General arrangement drawings.

17 ft. making for good take-off and landing on uneven ground; the comparatively thick, tapering, "semi-cantilever" wing, strongly braced, providing an ample structural safety factor; and the rigid construction of the fuselage, built in the form of a stout shell completely surfaced with plywood, affording all the protection of a closed motor car, are all features adapted with this end in view.

When the machine was flight tested at Clover Field, Calif., last August, an actual speed of 135 m.p.h. was attained with the engines running at less than full throttle, seven passengers on board, and with sand ballast equivalent in weight to two more passengers. It was also demonstrated that flight could be maintained on the centre engine alone, or any combination of the smaller wing engines.

The centre engine is a 250 h.p. Waterman 9-cyl. air-cooled radial, while the two-wing engines are smaller ones, being 100 h.p. Kinner 5-cyl. air-cooled radials. The central engine is mounted in the nose of the fuselage, and the wing engines are suspended below by struts in such a manner as to absorb most of the vibration within the mounts. Each of these wing engines is housed in a neat streamlined cowling, and are located several feet to the rear of the centre engine. Head resistance, so far as the engines are concerned, is thus reduced to a minimum—which, in fact, holds good elsewhere in this machine, exposed surfaces having been faired or streamlined.

The wings, which, as previously stated, are of fairly thick section, taper from root to tip, and are in two main sections, being attached to a central root, formed on the top of the fuselage, which contains the fuel tanks. The latter contain fuel sufficient for a 7-hours' flight, while the oil tanks are built in the engine mounts, within the cowling.

Wing bracing is by streamlined struts, sloping out and up from the bottom of the fuselage to the wings, via the wing engines. Of the tail surfaces only the rudder is balanced.

The fuselage is of the cabin type, of deep rectangular section tapering to a vertical knife edge at the rear. The pilot's cockpit is located in the nose immediately behind the centre engine and just forward of the leading edge of the wing. A curved wind shield conforming to the general outline extends up to the leading edge of the wing, affording the

pilots ample protection from the elements and at the same time providing an excellent visibility.

Dual "Dep" control is fitted, and the two seats are arranged on either side of a large door giving easy access to the passenger cabin. The latter, which has a displacement of 228 cub. ft., is luxuriously fitted up, the walls and arched roof being finished in matched grain gumwood. The chairs are deep and comfortable, and in the sides of the cabin are large non-shutterable glass windows, adjustable from within. Fittings are of satin-finish silver, while electric cigar-lighters, card tables, concealed ice-water tank, and lavatory (with hot water) are some of the conveniences provided.

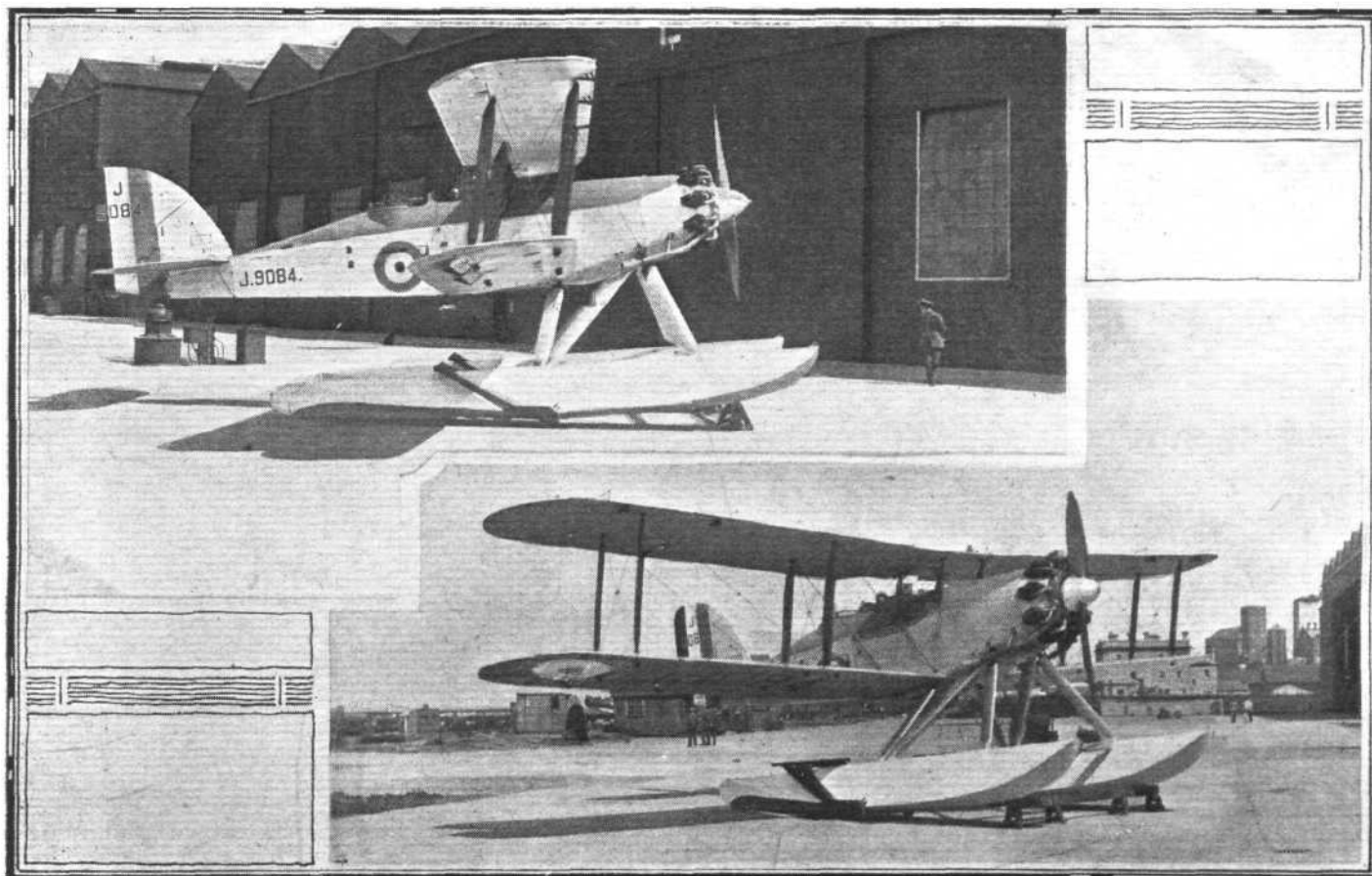
In addition to the passenger cabin there is a luggage space of 40 cub. ft. If required, the machine can be converted into a freight carrier in 10 minutes.

The landing gear, which, as before stated, is exceptionally wide, has proved to be highly efficient in tests. The landing shock is taken up by a hydraulic absorber permitting a vertical displacement of 14 in. Lesser taxiing shocks are taken by the usual rubber absorbers enclosed within the wing motor nacelles. Sauzedde wheels and brakes, with 35 by 8 in. tyres, are controlled in unison by a hand-brake lever within the cockpit, or operated independently for taxiing by the rudder bar.

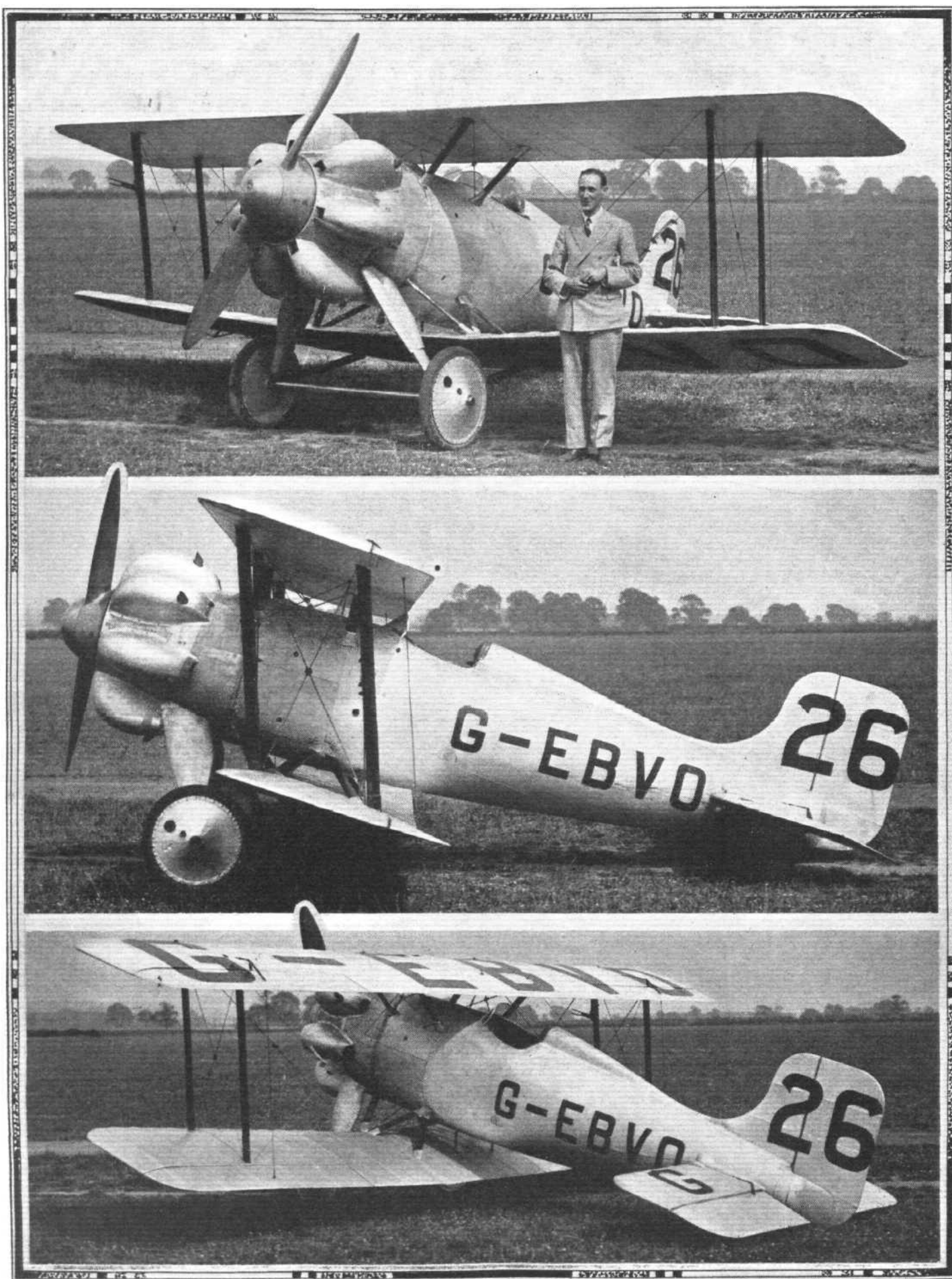
In conclusion, it may be mentioned that besides the "Air Yacht" the Bach Company have produced two other types—the C-S.1, a small three-seater cabin biplane, and the C-S.2, a four-seater of similar type.

The principal characteristics of the Bach "Air Yacht" are as follows:—

Span	52 ft 3 in.
O.A. length	37 ft. 3 in.
Wing area	412 sq. ft.
Weight, empty	2,650 lb.
Weight, laden	5,500 lb.
Weight per sq. ft.	13.3 lb.
Weight per h.p.	12.2 lb.
Speed range	40-120 m.p.h.
Fuel capacity	150 gals.
Everling Quantities (Metric)	
High-speed figure	11.3

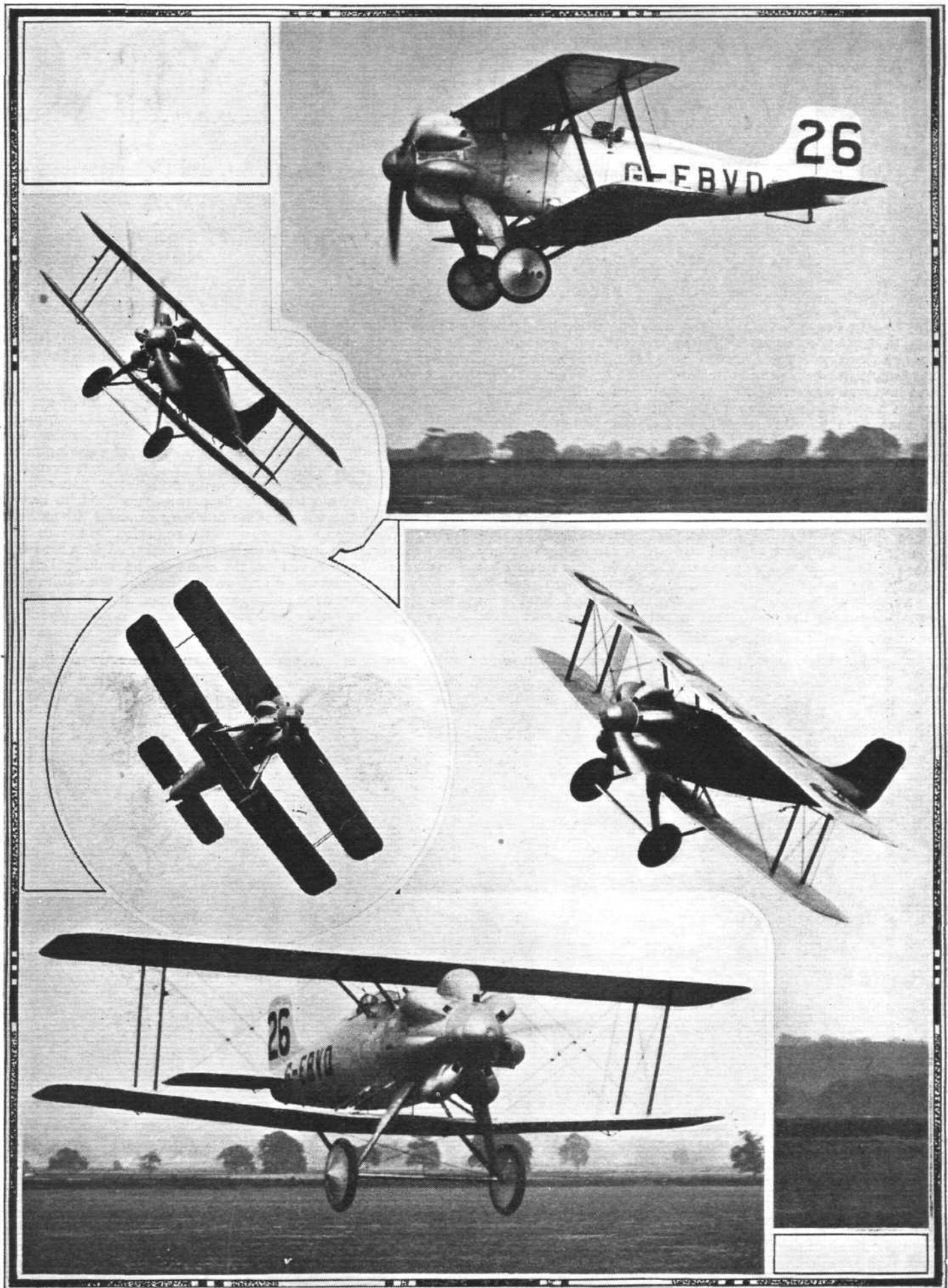


LANDPLANE AND SEAPLANE TOO : These two photographs show the Westland "Wapiti," Bristol "Jupiter VI" engine, fitted with floats. The two types of undercarriage are interchangeable. The machine has recently passed its tests as a seaplane at Felixstowe, and is reported to handle very well indeed.



[“FLIGHT” Photographs]

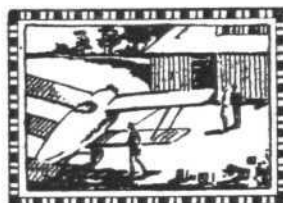
THE BLACKBURN “LINCOCK”: A light single-seater fighter, fitted with Armstrong-Siddeley “Lynx” engine. Note the “helmets” over the cylinders. The figure of the pilot (Capt. Blake) standing next to the machine gives a good idea of the smallness of the “Lincock.”



["FLIGHT" Photographs]

A LIGHT FIGHTER WITH HIGH PERFORMANCE : The Blackburn "Lincock," Armstrong-Siddeley "Lynx" engine, in flight, piloted by Capt. Blake. In spite of the relatively low power the machine has an impressive performance. It is also reported to be exceptionally nice to fly.

PRIVATE



FLYING

A Section of **FLIGHT** in the Interests of the Private Owner, Owner-Pilot, and Club Member

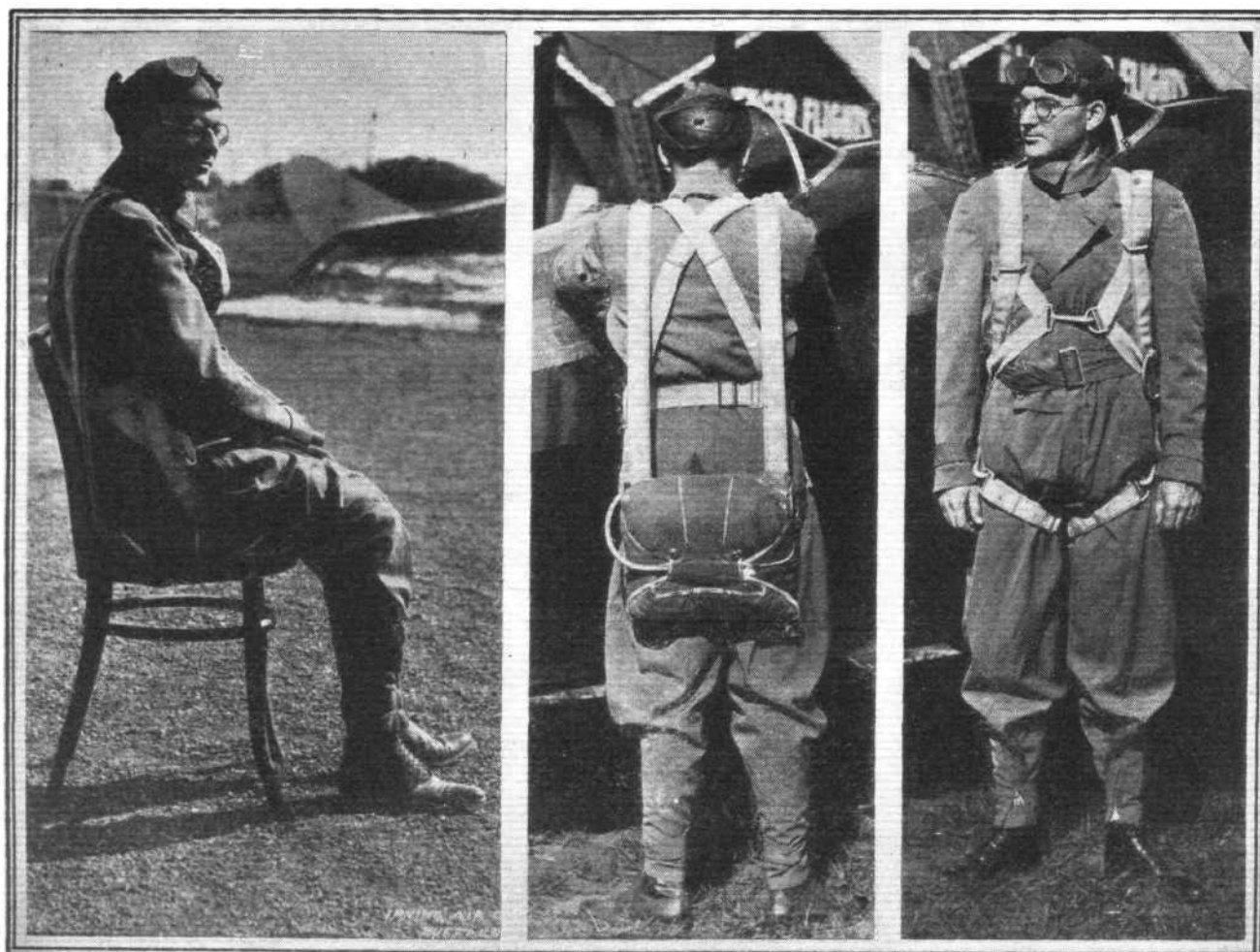
MR. LESLIE IRVIN

Parachutist and Private Owner

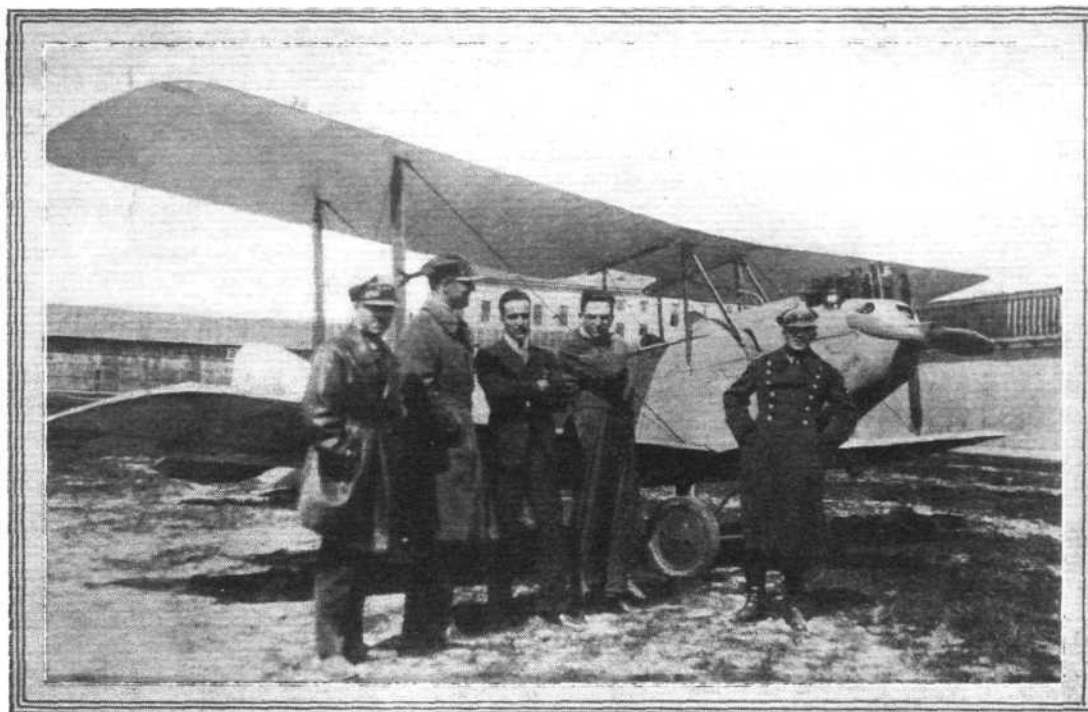
MR. LESLIE IRVIN is an American who fulfils two interesting rôles in English aviation, for he produces the Irvin parachutes for our Royal Air Force at the rate of thirty-five per week at his British works in the Garden City of Letchworth, Herts, and he is an experienced private owner of a D.H. "Moth," which he keeps in Letchworth. This is the second machine of that type he has owned. It has the Irvin parachute painted on the cowling. The first one he took to America last year and came back without it. It was not a case of trying to sell it; it was a case of who should he let have it. The machine created great enthusiasm wherever he went in the States, for there is nothing like it there. The American manufacturers have decided that the small low-powered two-place ships, as they term them, are not required in that country. They think that an aircraft owner wants to carry more than one passenger; that he often wants to carry his family, for instance. Mr. Irvin agrees that there may be many with such a wish, but he also thinks that there is an equal desire for the two-seater machines for men who want

to make the air a medium of travel for business, when they do not require more than one passenger with them, if that. He is convinced that our light aeroplanes would sell there at a reasonable price in hundreds.

The American cabin machines, he says, are none the less excellent types for their purpose. Many of them are like glass cases where the passengers are accommodated, giving views through windows in nearly every direction with luxurious comfort and freedom of space. The engine in the nose provides practically the only blind spot, but even then that is small, for there is considerable view between the cylinders. With a friend he flew from New York to Buffalo in a Fairchild cabin machine not long ago and the environment of the cabin, together with the behaviour of the machine and the weather, made a memorable flight. When his friend wished to be relieved of the controls he calmly left the "joystick" unattended and walked back in the cabin. For the greater part of the flight an occasional kick on the rudder was the only piloting necessary.



Mr. Leslie Irvin wearing his own parachutes which he manufactures in England for our Royal Air Force and in America for the American Army and Navy Air Services. The machine in the background is a "Swallow," one of the many flown by Mr. Irvin.



Mr. Leslie Irvin (in overalls) after landing at Warsaw, Poland, following a recent flight from England in his own D.H. "Moth." With him are (left to right) Capitaine Wroniecki, Commandant Willmann, Flt.-Lt. H. O. Long, and Col. Abzoltowski.

Mr. Irvin has owned many kinds of aircraft, "Jennies," "Swallow," "Standard," "Curtiss," Seagull flying-boat, Seagull Amphibian, also one of the original Wright twin-propeller machines, and a Curtiss Pusher, and his appreciation of our light aeroplanes is therefore based on an interesting experience. To compete in the American market it would be necessary to manufacture there, he thinks, for when the cost of transport is added to the price of the light aeroplane it is really cheaper to buy an American three or four place cabin machine of higher power. Mr. Irvin says that there is no aerodrome inadequacy in America, for nearly every city has its municipal aerodrome and many of the service aerodromes have civil ones adjoining.

As a private owner in England he has felt the difference in this respect. He proposed to fly to the Blackpool meeting recently in his own machine from Letchworth, and at the time of starting a forty-mile-an-hour wind was blowing against the course. He therefore found the necessity of seeking aerodromes on the route in order to refuel, but an investigation within the limit of the knowledge at his disposal did not reveal any aerodrome, and he was therefore reluctantly compelled to travel in his car to an air meeting to arrange a parachute display.

One of his recent trips was to Warsaw, Poland, and back, for business purposes. There he found that same astonishment over the light aeroplane; everyone wanted to talk "Moth" instead of parachutes. During the trip he had an experience of night flying in Germany and the utility of the beacons which illumine the air lines. When flying into Berlin he was able to follow these beacons for a long distance, five of them always being within sight, a pair of smaller lights being sandwiched between larger lights. On reaching the

last one he found an aerodrome below him as clearly defined by artificial light as though it was day. This stage was as safe and comfortable as it would be in daytime. The inconvenience that a lack of weather reports can make was shown when Mr. Irvin was leaving Warsaw on the return journey. He proposed to reach England in one day, and arranged to leave very early. But when awakened he had to abandon the start owing to heavy rains and no evidence of the weather on the route. Later he found that had he left as intended the rainstorm would have been cleared in a quarter of an hour and excellent conditions encountered over the remainder of the European route. The details of this flight were as follows:—

Stages.	Outward Flight Mileages.	Times.	
		hrs.	mins.
Henlow-Lympne ..	87½	1	15
Lympne-Ostend ..	81	1	05
Ostend-Rotterdam ..	82	1	10
Rotterdam-Dortmund ..	128	2	0
Dortmund-Hanover ..	113	1	25
Hanover-Berlin ..	152	1	40
Berlin-Posen ..	150	1	40
Posen-Warsaw ..	172	1	50
<i>Return Flight</i>			
Warsaw-Posen ..	172	2	20
Posen-Berlin ..	150	1	50
Berlin-Hanover ..	152	1	35
Hanover-Rotterdam ..	222	2	25
Rotterdam-Lympne ..	157		35
Lympne-Stag Lane ..	70		45

THE FRIEND SHIP FELLOWSHIP

THE title of this article is the name of a movement which has been promoted to sow the seed of international friendship amongst boys and girls and to give those of this country an opportunity of getting in touch with the children of other countries. Its organisation is, as it were, of a nautical nature, but also, we suggest, of an aeronautical nature now, as a Blackburn "Bluebird" has become a part of its equipment. The founder is Mrs. Ruth Knowles, wife of Mr. Stanley Knowles, M.A., F.R.G.S., a master at Tonbridge School. She is styled the "Skipper," and other naval ranks are similarly used by her followers. There is a membership of 3,000, covering the whole world, and Mrs. Knowles realised that she could only fulfil all her engagements to address her followers by using an aeroplane. Thus the acquisition of the Blackburn "Bluebird," which is appropriately called "The Friend Ship." It was so christened at a recent air rally at Penshurst Aerodrome at which 6,000 people were present, and amongst those who officiated besides Mrs. Knowles were Lady Heath, Capt. F. E. Guest, Lieut.-Col. Edwards and Lady Dorothy Mills.

Lady Heath performed the christening ceremony with sea water. Various speeches were made. Col. Edwards said that the occasion was greater than many of them realised. There had been many christenings of aeroplanes, but that was the first time one had been christened directly for the purpose of bringing education to the boys and girls of the country. As its activities grew it would bring them in closer touch with those of other countries.

Capt. Guest said he heartily supported the movement, which would be of immense importance if taken seriously. There was a vital necessity to ensure against risk of the nation, and he wanted young people to look at the matter from the territorial point of view and ensure the country against danger. They had not to be alarmed because they saw a middle-aged gentleman dressed in the uniform of the Air Force, because he felt it his duty while active enough to do something towards supporting a movement of that nature. The advantages to the taxpayer were enormous. An auxiliary squadron cost £160,000 less than an ordinary squadron and the upkeep per annum £40,000 less.

Mrs. Knowles then spoke at some length on the movement.

Owing to the non-arrival in time of the necessary flying licence it was not possible to fly the Blackburn "Bluebird" at the ceremony, but many passenger flights were made at 5s. 9d. each in several machines present.

Sir Sefton Brancker, Director of Civil Aviation, and Sir Alan Cobham were unable to be there, much to the disappointment of the crowd.

In connection with the movement there is to be an air rally at Harrogate on August 15. The draft programme is as follows:—3 p.m. Air Race. The course is from the aerodrome to Belmont Wood, then Christchurch, Harrogate, then to a tree in the S.E. corner of the aerodrome. Three circuits are to be flown, totalling 18 miles.

The whole course will be visible from the aerodrome and the turning points are close to populated areas in order to give the maximum amount of publicity to the flying.

Other events will be bombing the motor despatch rider, stunt flying, and an aerial golf competition. This latter event will finish at 8.30 p.m. along with joy riding and an air show. It should be noted that the aerodrome is a large field 1½ miles due south of Knaresborough and half-a-mile north of Plumpton Bar cross-roads. In size it is 440 by 340 yards, has a perfect surface and slopes slightly to the north-east. Approaches are clear except for three trees. Two fences on the north and west are about 8 ft. high, and those on the south and east 4 ft. Owners of large and fast aircraft should obtain permission from the Air Ministry before attending the meeting. Owners of light aeroplanes and their machines are heartily welcomed.

The rally is being held at the height of the season at Harrogate, when visitors will be present from all over the world.

Similar air rallies are scheduled as follows:—August 11—Brough, E. Yorks; August 18—Sherburn-in-Elmet, Yorkshire; and August 23—Whitley Abbey, Coventry.

LIGHT PLANE CLUBS

London Aeroplane Club, Stag Lane, Edgware. Sec., H. E. Perrin, 3, Clifford Street, London, W.1.
Bristol and Wessex Aeroplane Club, Filton, Gloucester. Secretary, Capt. C. F. G. Crawford, Filton Aerodrome, Patchway.
Hampshire Aero Club, Hamble, Southampton. Secretary, H. J. Harrington, Hamble, Southampton.
Lancashire Aero Club, Woodford, Lancs. Secretary, C. J. Wood, Oakfield, Dukinfield, near Manchester.
Midland Aero Club, Castle Bromwich, Birmingham. Secretary, Maj. Gilbert Dennison, 22, Villa Road, Handsworth, Birmingham.
Newcastle-on-Tyne Aero Club, Cramlington, Northumberland. Secretary, J. T. Dodds, Cramlington Aerodrome, Northumberland.

Norfolk and Norwich Aero Club, Mousehold, Norwich. Secretary, G. McEwen, The Aerodrome, Mousehold, Norwich.
Nottingham Aero Club, Hucknall, Nottingham. Hon. Secretary, Cecil R. Sands, A.C.A., Imperial Buildings, Victoria St., Nottingham.
The Scottish Flying Club, 101, St. Vincent Street, Glasgow. Secretary, Harry W. Smith.
Southern Aero Club, Shoreham, Sussex. Secretary, C. A. Boucher, Shoreham Aerodrome, Sussex.
Suffolk Aeroplane Club, Ipswich. Secretary, Maj. P. L. Holmes, The Aerodrome, Hadleigh, Suffolk.
Yorkshire Aeroplane Club, Sherburn-in-Elmet, Yorks. Secretary, Lieut.-Col. Walker, The Aerodrome, Sherburn-in-Elmet.

LONDON AEROPLANE CLUB

REPORT for week ending August 5.—Total flying time, 51 hrs. 45 mins. Dual instruction, 21 hrs. 10 mins.; solo flying, 30 hrs. 35 mins.
 ■Dual instruction: G. S. Charles, B. O. Davis, Miss Wilson, C. W. Bonniksen, W. L. M. O'Connor, H. W. Marlow, G. A. Hill-Reid, H. Sutton, E. R. Andrews, H. R. Presland, H. C. Bergel, E. K. Blyth, Mrs. B. Thatcher, R. F. Adams, J. W. Harrison, E. H. Thierry, J. W. Boutwood, Miss Hicks, Capt. R. S. Rattray, A. E. Mines, C. Peckham.
 Solo flying: E. L. D. Moore, G. H. N. Larden, L. Roche Kelly, P. W. Hoare, P. A. Wills, C. Campbell, Will Hay, J. J. Hofer, S. Nesbitt, N. J. Hulbert, B. O. Davis, T. E. Hearne, W. L. M. O'Connor, Miss O'Brien, E. S. Brough, E. H. Thierry, L. C. Davey.
 Holidays.—The Club will be closed down for the staff holidays from August 14 to 25, both days inclusive.

BRISTOL & WESSEX AEROPLANE CLUB, LTD.

REPORT for week ending August 4.—Total flying time, 37 hrs. 45 mins. Dual instruction, 25 hrs. 25 mins.; solo instruction, 4 hrs. 15 mins.; "A" licence soloists, 2 hrs. 45 mins.; passengers, 17 flights, 3 hrs. 30 mins.
 Under instruction (with Mr. Travers): Miss Miles, Messrs. Peters, Allinson, Rogers, Chopra, Singh, Lynas, Neale, Charlton, Hibbert, Greenhill, Clarke, Keeling, Byrnes and Dr. Farr. (With Mr. Culverwell): Messrs. Allinson and Fox. (With Mr. Tratman): Messrs. Lynas, Allinson, Greenhill, Heaven, Clarke and Byrnes.
 Mr. Greenhill and Mr. Lynas made their first solo flights this week, and these, with Miss Miles and Mr. T. H. Clarke, should be getting their licences shortly.

Good weather has favoured us and enabled us to break our previous record for the week.

HAMPSHIRE AEROPLANE CLUB

REPORT for week ending August 3.—Total flying time, 66 hrs. 10 mins. Dual instruction, 37 hrs.; "A" pilots, 10 hrs. 35 mins.; solo, 3 hrs. 5 mins.; passenger flights, 13 hrs. 25 mins.; tests, 2 hrs. 5 mins.
 Total flying time for July, 255 hrs. 15 mins. Dual instruction, 135 hrs. 40 mins.; "A" pilots, 58 hrs. 56 mins.; solo, 33 hrs. 10 mins.; passenger flights, 21 hrs. 30 mins.; tests, 6 hrs. 29 mins.

Instruction (with Flight-Lieut. F. A. Swoffer and Mr. W. H. Dudley): Mr. Coope, Mr. Colls, Mr. Goldman, Mr. Craske, Mr. Neave, Mr. Buckley, Dr. Russell, Mr. Sturge, Miss Melville, Capt. Molyneux, Mr. Dalrymple-Smith, Mr. Hall, Mr. Cambell, Mr. Mole, Mr. A. V. Roe, Mr. Clifford, Sqdn.-Ldr. Bradly-Johnson, Comdr. Bell, Mr. Brodrick, Mr. Evershed, Mr. Endacott, Mr. Mariner, Mr. Phillimore, Miss Grace, Mrs. Crook, Mr. Thorn, Mr. Cator, Mr. Reuther, Mr. W. Martin, Mr. T. Martin, Mr. Doxatt, Mr. Brewster, Mr. Agar, Mr. Turner, Mr. Grahame Gibbs, Lieut. Du Cane, Mr. D. Rumble, Mr. Berney, Mr. Redwood.

"A" Pilots: Mr. Wills, Mr. Heath, Capt. Kirby, Flying-Officer Hayter, Lieut. Fagan, Mr. Michelmore, Mr. Larden, Mr. Wells, Mr. Tillar, Flight-Lieut. Crawford, Mr. Parker, Don J. de la Cierva, Mr. H. King, Miss Grace.

Soloists: Mr. Curtis Nuthall, Mr. Colls, Mr. Sturge, Mr. Dalrymple-Smith. Passengers: Mr. Lanley, Mr. Esiorgue, Miss Stringer, Mrs. Hooper, Mrs. Forest, Miss Tubbs, Mrs. West, Mr. Crook, Miss E. Tubbs, Miss Forde, Mr. Clifford, Mr. Marshall, Miss Clifford, Miss Alexander, Miss Wiles, Mr. Roake, Mr. and Mrs. Weillan, Mr. Childs, Mr. Booth, Miss Head, Mr. Coveney, Mr. and Mrs. Odium, Mr. Fenwick, Mr. Thorn, Mr. Milford, Mr. Harrington, Mr. and Mrs. H. Smith, Mr. Hamilton, Miss Campbell, Mr. Turner, Mr. Murphy.

Our President, Lord Louis Mountbatten, paid a visit to the Club on Thursday, August 2, and was flown back to his residence by Flight-Lieut. Swoffer.

Lady Brecknock, who came over in the morning from Addean, returned to lunch by air, the Chief Instructor landing the machine in front of the house. Mr. Colls passed the test for his "A" licence, the machine finishing 20 yards from the mark in both tests. He is to be congratulated on the very good show put up. Mr. Dalrymple-Smith and Mr. Sturge both carried out very successful first solos.

The Club closed down on Friday for 10 days, and the Chief Instructor states it has been the longest week he has ever known.

The month of July was another record for the Club, the total flying time beating the previous record by 55 hours, and still we hope to go on.

LANCASHIRE AERO CLUB

REPORT for week ending July 28.—Flying time, 42 hrs. 50 mins. Instruction, 22 hrs. 35 mins.; solo flights, 13 hrs. 35 mins.; passenger flights, 5 hrs.; tests, 1 hr. 40 mins.

Instruction, with Mr. Baker: Goss, Kay, Weale, Garner, Greenhalgh, Davies, R. G. Nelsoe, J. G. Miss Baerlein, Faulkner, Ashworth, Gort, Fallon, Twemlow, Caldecott, Riley, Whitehouse, Williamson, Allott, Eckersley, Parkes, Mason, Agar, Davies, D. B. Stross, Nelson, D. Meads, Sellers, Mills, Secker, Harrison, Cheyne, Miss Emery, Gattrill, Cundiff, Serck.

Soloists (under instruction): Tweedale, Chart, Harrison, Garner, Sellers, Pilots: Nelson, D. Hardy, Mills, Lacayo, Fallon, Gort, Chapman, Meads, Leeming, Agar, Twemlow, Gattrill, Ruddy, Caldecott, Michelson.

Passengers.—With Mr. Meads: Goss, Sweeney, Mrs. Sweeney. With Mr. Lacayo: Nelson, Mrs. Parkes, Kilford, Jordan. With Mr. Goodfellow: Miss Briggs, Mills. With Mr. Leeming: Dunning, Heys. With Mr. Scholes: D. R. Goodfellow. With Mr. Baker: Jones, Redman, Mahon, Hodgkinson, Miss Glover, Sinclair, Massey. With Mr. Nelson: Caldecott, with Mr. Gattrill: Phillips. With Mr. Cantrill: Howarth, Jones.

LIVERPOOL & DISTRICT AERO CLUB

The Liverpool and District Aero Club has now been flying for a month, but (like Brer Fox) has laid low—(so far as flying reports are concerned).

The Royal Aero Club King's Cup Committee were optimistic enough to entrust us, a new club, with the control arrangements at our Hooton Park Aerodrome, with the immediate result that Saturday, July 21, was decided upon as our official opening day, and a club display arranged for the afternoon.

Notwithstanding that this was our first attempt, as a club, of running a Race Control, the R.A.C. officers on the spot were good enough to remark that our arrangements were admirable, and one hopes that these words did not refer wholly to the refreshment department. Great interest was shown in the King's Cup machines, and a large crowd of spectators arrived during the course of the morning to see them go through.

The afternoon's programme commenced at 2.30 with a balloon bursting competition followed by racing, bombing, and other events, and during the interval for tea a polo match was played by our friends the Wirral Polo Club, who have their pitch upon our aerodrome. The star turn of the afternoon was an aerobatic display by two machines (not belonging to the club) which arrived out of the blue, tore the atmosphere into chunks, did some of the prettiest slow rolls one has seen—and departed.

The Avro Avian machine presented to the club by our president, Sir Frederick Bowring, was then christened "Terra Nova" by Lady Ursula Filmer Sankey. One wonders how dry Monopole mixed with XX—none of the former was left in the bottle when one examined it later! Lady Ursula and her sister, Lady Mary Grosvenor, "took the Air" with Lieut. Bentley, as did also Miss Margaret Bevan, Liverpool's Lady Lord Mayor.

Our second machine "Rangels" XY, presented by Sir Charles Nall Cain; was also much in evidence, winning one race and doing yeoman service throughout the day. Our third "Avian," WK, has now been delivered, and owing to the mellowing influence of a Supper Dance at the Adelphi Hotel, Liverpool, on the night of the 20th, and the honied brigandage of Mr. R. H. Thornton, our excellent chairman, will no doubt soon be paid for.

The Lancashire Aero Club, who have shown a most sporting spirit in giving us every possible assistance from the beginning of things, kindly sent over a machine to help things along, and among other visiting owner pilots were Miss W. Brown ("Avian"), Mr. K. Twemlow ("Moth") and Mr. W. Styram ("Avian"). Visiting owner pilots were presented with silver ash trays suitably inscribed as a memento of the occasion.

Although we do not benefit under the subsidy scheme, the club is in a very enviable state, its members numbering over 130. Hooton Aerodrome is one

of the finest in the north, and the club has sole use of a magnificent hangar and auxiliary buildings, possesses three "Avian" machines, Lieut. Bentley as chief instructor and Mr. Howard Pixton as ground engineer.

Flying only started on July 3. Our record to July 29 is as follows: Total hours flown, 63 hrs. 38 mins.

Pilots: J. B. Allen (assistant instructor), V. Crosthwaite, H. Christie, F. Davison, W. Leete, E. Ward.

Under instruction: E. H. Williamson, W. G. Barber, Rev. Woosnam-Jones, J. W. E. Irving, E. C. Francis, J. MacClure, R. Barker, W. A. Wilcox, D. K. Mitchell, H. R. Birtill, T. H. Williamson, G. Davey, Miss M. Hughes, J. C. Edgar, A. O. Chatterley, J. O. Sparke, E. G. Andrews, J. F. Perkins, A. K. Barnes, J. P. McGeagh, R. D. Keniston, W. L. Goodman, S. S. Henderson, Miss D. Ellis, R. H. Thornton, T. H. Naylor, Mrs. Naylor, J. R. A. Alcock, J. Benson.

Mr. McClure, our first *ab initio*, was launched on his first solo on the evening of the 29th, and put up a very good show—we still have three machines and no additional grey hairs.

Mr. Benson (who is also a member of the Lancashire Club and has done quite a few hours with them) did his first solo on the evening of the 31st with great success. We only regret that "Old Tom" was not along to congratulate him!

It is hoped that private owners and others will take full advantage of the Club's aerodrome when visiting the Liverpool, Birkenhead or Chester districts. A ground staff is available daily (except Mondays), and visitors will be welcomed.

Will those wishful to become members note that no entrance fee is payable by members joining before November 1, 1928.

Full particulars of the Club's aims, subscription, etc., may be obtained on application to the Secretary, A. L. Nickerson, Liverpool and District Aero Club, Hooton Park Aerodrome, Hooton, Cheshire.

NEWCASTLE-UPON-TYNE AERO CLUB

REPORT for week ending July 29.—Total flying time, 26 hrs. 10 mins.; instruction, 8 hrs. 25 mins.; "A" Pilots, 8 hrs. 30 mins.; solo training, 20 mins.; passengers, 8 hrs. 45 mins.; test, 10 mins.

Instruction, with Mr. J. D. Parkinson: Mrs. Kish, Miss Lynden Bell, Messrs. Lawson, Leete, Kendrick, Walker, Temple, Moore, Hall, Lynden Bell.

"A" Pilots: Mrs. Heslop, Messrs. Irving, Runciman, W. B. Ellis, De Pledge, C. Thompson, Turnbull, Percy, Wilson, Dr. Dixon.

Solo: Mr. Moore.

Passengers, with Mr. J. D. Parkinson: Mrs. Robson, Messrs. John Bell, Hayton, Oakes, Robson, Grundy.

On Sunday last Miss Leathart was obliged to make a forced landing with the "Grasshopper" and succeeded in putting down the machine in a very desolate part of moorland country. It was not until the next day after repairs had been effected that she was able to return, and from descriptions of the place it would appear that her take-off was a very fine effort.

We had the pleasure of a visit from Miss Jose Collins last Thursday. After a flight with Mr. Parkinson, she expressed her delight, and a desire to become a private owner.

NORFOLK & NORWICH AERO CLUB

REPORT for week ending July 29.—Total flying time, 21 hrs. 5 mins.

Instruction with Mr. Young.—Messrs. A. Richardson, C. Harvey, A. Cooper, A. Kirkby, W. Mills, H. Cator, Mrs. Cator, D. Corsellis, T. Image, A. G. Marshall, C. Land.

Soloists: Messrs. C. C. White, E. Lambert, E. Varden Smith, R. Potter, R. Harmer, N. Brett, A. G. Lofty, H. Pank, W. A. Ramsay, W. Cubitt, H. Cator, G. Barker, G. Surtees, T. Image.

Passengers: 27.

We are pleased to report the first solo of our Vice-Chairman, Capt. Harry Cator, M.C. He made a couple of very fine landings, and should soon be taking his "A."

Capt. Clarke has passed all his tests, and applied for his licence, and two others have done all the flying tests and at the moment are busily swotting up John Leeming and A.N.D.'s. So we look like having a little money in the near future.

The Club is grateful to Mr. A. G. Barrett for his splendid gift of a model of the Westland Wapiti. Hours have been spent in making this model, and it is complete with slots and many other interesting little gadgets. Mr. Barrett is to be complimented on his industry.

REPORT for week ending August 5.—Total flying time, 24 hrs. 40 mins.

Instruction (with Mr. Young): Messrs. R. Harvey, A. Richardson, Mrs. Cator, J. Simmons, G. Wharton, A. Cooper, C. Ransome, D. Corbellis, C. Land. Soloists: Messrs. C. Gowing, A. Richardson, H. Cator, C. White, G. Barker,

F. Gough, W. P. Cubitt, R. Potter, N. Brett, T. Image, E. Varden, Smith, H. Neave, E. Lambert, G. F. Surtees, W. A. Ramsay.

The fine weather which appears to have set in for a time has attracted quite a goodly crowd to the aerodrome and our flying time accordingly increases. When we are blessed with the return of our "Moth" we hope to soar into the giddy heights of 40 and 50 hours.

On Wednesday we are promised an exhibition by the Autogiro, and we are really looking forward to it; sounds interesting, and should attract a crowd of visitors.

YORKSHIRE AEROPLANE CLUB

REPORT for week ending July 28.—Flying time: 23 hrs. 45 mins. Instruction: 10 hrs. 25 mins. Soloists: 11 hrs. 35 mins. Passengers: 1 hr. 45 mins.

Instruction (with Captain Beck): Miss Ellison, Miss Wilson, Messrs. Dujardin, Upton, Lloyd, Slater, Watson, Gill, Lievens, Fitton, Campbell, Marriott, Roberts, Lupton, Collins, Arundel.

"A" pilots: Messrs. Thomson, Ellison, Wilson, Dick, Lister, Ambler, Birch, Reynolds, A. Crowther, Clayton, Wood.

Passengers: 9.

With the exception of Saturday, we have staggered through this week with only one serviceable aeroplane, but on this day the Blackburn Aeroplane Company very kindly lent us TC to meet the exigencies of our first effort to combine with the motor-cycling fraternity of the district. The Ilkley and District Motor Cycle Club were responsible for the grass track racing programme, and the Club for the aerial exhibitions and joy-riding, being helped in the latter by the Surrey Flying Services Avro. Fair weather favoured the meeting, with the result that we got a gate of some 6,000 people, three or four new members and many inquiries, and one is of the opinion that similar shows will create new interest in the motor-cycling world and at the same time bring a new sport to the heart of motor-cycling enthusiasts, thereby bringing in new members of the Club.

As this was by nature of an experiment, we did not invite visitors, but on the strength of its success, invitations will be sent to private owners, manufacturers, and clubs; in fact, to anyone who would care to come.

REPORT for week ending August 4.—Flying time, 32 hrs. 10 mins. Dual: 13 hrs. 5 mins. Soloists: 18 hrs. 35 mins. Passengers: 30 mins.

Instruction (with Captain Beck): Miss Ellison, Messrs. Watson, Clayton, J. Blackburn, Ellison, Brodie, Lloyd, Brown, Arundel, Gibson, Clarke, M. B. Lax, Fitton, Gill, Senior, Parks.

Soloist: Mr. Fitton. "A" Pilots: Messrs. Thomson, Clayton, Ellison, Reynolds, Birch, Wood, M. B. Lax, Ambler, A. Crowther, Norway, Humphries. Passengers: 3.

Despite all our hopes we have been unable to get RF's engine back in time to make this machine serviceable for the holidays. However, we started off cheerfully with two machines yesterday, but in the late afternoon fate decreed that one should be taken away from us. Mr. Ellison was coming in to land in the ordinary way, and away went the bracing cables; result as usual, complete under-carriage, propeller, etc. Our only surprise is that this has not happened before, for one might just as well be landing on and taking off granite as from our arid aerodrome in its present condition.

This week's funny story. A letter arrived the other day addressed to the Secretary, the Leeds Flying Club, and started off as follows:

"Dear Sir,—I have got one of your member's birds up in my loft and have fed and watered her for several days... Ring No. TU 1254 XL 660, etc." This was duly forwarded to the Pigeon Club.

FROM THE FLYING SCHOOLS

The De Havilland Flying School, Stag Lane Aerodrome

REPORT for week ending July 29.—Total flying time, 242 hrs. 10 mins. Instruction: Dual, 100 hrs. 45 mins; Solo: 123 hrs. 15 mins. Other flying, 18 hrs. 10 mins.

This has been another excellent week for the school, and with still more pupils attending, it has been necessary to add yet another Moth to the school's already extensive fleet.

Nine pupils carried out excellent first solos, four pupils obtained "A" tickets, and one pupil passed his "B" licence tests. A brilliant effort for one week!

On July 25 Capt. de Havilland, flying a new Gipsy Moth, with his wife as passenger, broke the world's height record for light aeroplanes, by a very wide margin. The Gipsy is wasting no time in adding to its King's Cup laurels.

Nine new Moths were tested, and among the new owners taking delivery was the Hon. D. F. Tennant, who is keenly interested in his new hobby.



Mrs. Hilton Philipson, M.P., taking off from Croydon Aerodrome in an Avro "Avian." She is thought to be the first lady M.P. to have [flown].



Great Flying-Boat Cruise

THE R.A.F. Supermarine-Napier "Southampton" flying-boats engaged on the cruise to Australia reached Sydney punctually on August 1. A local Service D.H.9a machine, which was stunting at the time, made a sudden forced landing in the harbour, slightly injuring the pilot but not his passenger. The machine was partly submerged and had to be towed in. The log of the cruise from Karachi to Singapore is given on p. 695.

Flight to South Africa

FLYING-OFFICER P. MURDOCH, of the South African Air Force, who is flying to Cape Town from England on an Avro "Avian," arrived at Bengazi from Cantania, Sicily, on August 1, having flown overnight, and Heliopolis on August 2. He went on to Wady Halfa, a distance of 460 miles, the next day and reached it by noon. By the next morning, August 4, he was at Khartoum, and Mongalla, Southern Sudan, on August 5, eight days after leaving Croydon aerodrome. He arrived at Kisumu on August 6, and left for Tabora on August 7.

A Polish Atlantic Attempt

Two Polish airmen, Maj. Idzikowski and Maj. Kubala, left Le Bourget, Paris, on August 3 at 5.45 a.m. in an attempt to fly the Atlantic on a S.E.C.M. Amiot 120 B3 biplane fitted with a 650 h.p. Lorraine-Dietrich engine. They were escorted as far as Dreux by a French military aeroplane, and signalled that everything was satisfactory when parting about an hour later. Cloud-banks obscured the machine on the coast, and it was first sighted by a trawler later in the morning flying south-west at 600 ft. about 60 miles from Lorient. There was then silence for 18 hours, for no wireless was carried. Next the steamer *Aztec* sighted the machine about 100 miles north-east of the Azores, which was on the course the airmen had proposed to follow. About two hours later a message was sent by the British steamer *Amakura* stating that the machine circled that ship after appearing from the west at a height of 500 ft., then disappeared northward, flying fast. There were no signals made. The position was then 200 miles north-east of the Azores. This information came through just after 5 a.m. Saturday morning, and it suggested that the machine was returning towards Europe. This proved to be true, for the machine dropped in the sea beside the steamer *Samos* 60 miles off Cape Finisterre in the afternoon, and the two airmen were rescued, whilst the machine was towed to Leixoes, near Oporto. The rescue was accomplished with difficulty, and Maj. Kubala was hurt through slipping on the deck of the steamer. The flight had lasted 31 hours, and failed through trouble with an oil-feed pipe. The engine was stopping at the moment the ship was sighted, and the machine capsized on landing. Both airmen had to swim to the ship. When the oil-feed defect occurred the machine was 300 miles beyond the Azores and had been flying for 20 hours.

The flight was planned by the Polish War Office with prolonged preparation and caution. The two majors were chosen about a year ago and received a special course of training for several months. They had strict orders not to start on the flight unless the weather was judged perfectly favourable, and in accordance with this they had been waiting in France since May. Both officers served during the War with the Russian Air Force and now belong to the Polish Air Force. Their machine was christened "Marshal Pilsudski." Parachutes and a collapsible rubber boat were carried, and enough petrol for a 48-hour flight. The rations included champagne, cold coffee, and chocolate and chicken. Both officers returned to Paris and the machine was dismantled.

Italian Polar Expedition Returns

GEN. NOBILE and his companions, who were rescued after the crash of the airship *Italia*, returned to Rome on July 31, and received a great welcome. The supply ship *Citta di Milano* has taken on board two small aeroplanes which will make further search for the rest of the expedition which drifted away with the envelope of the *Italia* and have

not been heard of since. The ship will collaborate with the ice-breaker, *Krassin*. Rescue expeditions are still continuing the search for Capt. Amundsen and Maj. Guilbaud, who are lost in the Latham flying-boat in which they left Tromsø for King's Bay to join in the rescue of Nobile's crew. Some experts are satisfied that the flying-boat fell in the sea before reaching King's Bay. When last seen it was flying low north-west of Bear Island and the last wireless message it sent asked stations in North Norway for weather conditions at King's Bay.

Round the World Flight

MAJOR FRANCO, the Spanish airman, started on his round the world flight in the "Numancia," a Dornier-Wal (Napier "Lions") flying-boat, from Cadiz, on August 1. He headed for the Azores but was obliged to make a forced landing off Faro, on the Gulf of Cadiz, and return to Huelva, 65 miles north-west of Cadiz, for repairs, which, it is reported, will take a month.

"Bremen"-Atlantic Plane Salvaged

THE dismantled "Bremen" monoplane in which Baron von Huenefeld, Capt. Koehl and Major Fitzmaurice flew the Atlantic this year from Ireland to Greenly Island, Labrador, arrived at Quebec on board a boat recently, having been stranded on the island since last April. It will be reassembled and displayed at exhibitions in Quebec and New York before despatch to Germany. A dedication of a tablet to commemorate the landing is to be made.

New Antarctic Expedition

COMMANDER R. BYRD, the Atlantic airman, hopes to leave New York on August 22 for New Zealand preparatory to exploring the Antarctic lands. About £40,000 has already been subscribed for the venture but an equivalent sum is still needed and will be supplied by the American industries who expect to benefit by the scientific work involved. Three ships have been bought, including an ice-breaker. Four aeroplanes will be taken, comprising a Ford-Floyd-Bennett, a Fokker machine, now doing a 10,000-mile test tour; a Fairchild machine with Pratt and Whitney engine, and a D.H. "Moth" for air courier and quick survey.

Lady Heath as Commercial Pilot

LADY HEATH, following her success at the Rotterdam Flying Meeting, has now joined the ranks of commercial air pilots. She has entered the service of K.L.M. (Royal Dutch Air Lines), the Dutch Air Ministry having agreed to extend her British Passenger (or "B") licence—which she obtained some time ago—to cover Holland, provided she passed the Dutch medical examination. Her first "job" was accomplished on July 25 with a return journey from Amsterdam to Paris in one of the Fokker air liners, and on July 27 she piloted a 14-passenger Fokker-Jupiter from Amsterdam to Croydon. Lady Heath hopes to be second pilot in one of the Fokker F.7A (three Armstrong-Siddeley "Lynx") machines, four of which are being flown out to the Dutch East Indies next September for operating air services out there.

Sir John Salmond's Australian Tour

AIR VICE-MARSHAL SIR JOHN SALMOND, who is visiting Australia to advise on air defence matters and the Royal Australian Air Force generally, intends to fly round Australia, commencing on August 16 from Point Cook. The flight will cover the coastal areas of Queensland, North Australia and North-Western Australia, where air defences do not exist except for a few Supermarine Seagulls which co-operate with the Navy in charting the Great Barrier Reef. Sqdn.-Ldr. Drummond and Flight-Lieut. Ledger will accompany Sir John Salmond. After tracing the coast to Darwin they will return southward via Newcastle Waters and Alice Springs, reaching Adelaide on September 2.

Aircraft Helps to Detect Sunken Submarine

THE Italian submarine F.14 sank in 22 fathoms of water in the Adriatic on August 6 while engaging in exercises in which it collided with a destroyer. A seaplane observer helped to locate the position of the craft.

THE ROYAL AIR FORCE FLYING-BOAT CRUISE

Log of the Far East Flight from Karachi to Singapore

In our issue for April 5 last we published the official log of the Far East flight of four Supermarine-Napier flying-boats up to Karachi. Below we give the concluding stages of the flight to Singapore, together with the covering report of the Officer Commanding, Group-Capt. H. M. Cave-Browne-Cave. The total distance covered since leaving England was 9,434 nautical miles, during which, says the report, the aircraft and engines had been very satisfactory and the only troubles of any importance were:—

(a) Heavy deposits of barnacles gathered on the bottoms of all the hulls during the 12 days' stay at Colombo, which greatly increased the take-off times of all the boats. When the hull bottoms were cleaned in shallow water at Trincomali the "take-off" performances returned to normal. Throughout the cruise it has seldom been possible to clean the bottoms of the hulls in deep water owing to the presence of sharks.

(b) A water leak occurred in the starboard engine of S.1152 due to the failure of a washer in the water supply system to the rear of the outer cylinder head. This necessitated shutting off the starboard engine for the last 20 minutes of the flight to Pulicat Lake. When the defective washer was replaced no further trouble was experienced.

(c) The eyebolt in the centre rudder which carries the connecting rod to the starboard rudder of S.1150 broke at Mergui. This was temporarily repaired before the flight left Mergui and the eyebolt was renewed at Penang.

The aircraft were moored out at Felixstowe on October 13, 1927, and were brought ashore at Singapore on February 29, 1928. During the whole of this period, mostly under tropical conditions, the aircraft have been moored out, except when actually flying and except for one day at Karachi, when they were brought ashore for the examination and cleaning of the hull bottoms. On arrival at Singapore the aircraft were brought ashore for thorough examination, cleaning and repainting.

This examination has shown the aircraft to be in very good condition, and at no time have the metal hulls leaked. No wires have broken and the aircraft structures have required practically no adjustment.

The residents at each place visited have been most hospitable, doing everything possible to help the Flight and make their stay enjoyable. This has contributed materially to the success of the cruise and the Flight are grateful for it.

The weather conditions on the whole have been good. The only heavy rain encountered in flight being in Ceylon. At Penang and Singapore the Flight landed just in time to escape heavy rainstorms. The presence of haze has made it difficult to get satisfactory photographs from the air. Morning mists delayed the start of the Flight from Chilka Lake by one hour, and obscured the ground shortly after leaving Akyab. Apart from this the visibility has been good. The sea has generally been calm to slight, but around Ceylon and on the Southern part of the East Coast of India it was sufficiently rough to make a "take-off" in the open sea dangerous. As there were no forced landings this did not affect the Flight. The winds have seldom exceeded 15 m.p.h. and have never been strong enough to interfere with the flights. The conditions inside the hull, when on the water, have been rather hot and sticky, especially from Rangoon to Singapore, but no worse than in many ships in the same climate. The usual day temperature in the hull on the water was 80 to 85° F., and the maximum 97° F. (Rangoon). Since the aircraft have been brought ashore at Singapore the temperature inside the hull with airmen working there rises to 100° F., in spite of awnings and every effort to maintain good ventilation.

During the period of the cruise (December to February) the whole of the route followed, with the exception of the area round Ceylon and the Southern part of the East Coast of India, where flying-boats of existing types could only

take-off in the open sea under favourable conditions, appeared to be very suitable for the operation of flying-boats.

The visit of the Flight aroused considerable interest at each of the places visited; particularly along the Southern parts of the coasts of India, and at small places such as Pulicat and Chilka Lakes, where the inhabitants had not seen aircraft before. The Flight has been met on arrival at each port by the authorities in charge of the arrangements and in most cases by the principal officers, officials and residents. Calls have been paid at each port visited on the Governor, Commissioner or Resident, and on the principal authorities. Requests were received from local authorities for the Flight to circle in formation and drop messages at Quilon and Madras, and to fly low in formation over Diu, Allepi, Trivandrum, Muletivu, Point Pedro and Vizagapatam; these requests were complied with. The Flight formed an aerial escort on the departure of H.M. the Amir of Afghanistan from Bombay on December 17, 1927.

The base party arrived at Singapore on January 11, 1928, and had everything ready for the arrival of the Flight.

The log of the flight (giving distance in nautical miles, flying time, and average ground speed in knots), is as follows:—

Wednesday, December 14—Karachi. 475 miles. (7 hrs. 0 mins.; 68 knots.)—Aircraft of the Flight were inspected by Air Vice-Marshal Sir W. Geoffrey H. Salmond (A.O.C., R.A.F., India). All officers and airmen slept in the flying-boats, which were ready in all respects (500 galls. fuel) for the continuation of the cruise.

Thursday, December 15, Karachi—Bombay. 475 miles. (7 hrs. 0 mins.; 68 knots.)—A.O.C. India embarked in S. 1152 at 07.15. Flight "took-off" and left in formation for Bombay at 07.30 in fine weather with a S.E. wind of 2 m.p.h., and hull and strut temperatures of 70° F. Flight circled over Diu (Portuguese India) at 12.00, the Fort firing a salute, and landed in formation at Bombay at 14.30, securing to buoys off the Yacht Club. The weather conditions throughout the flight were good. Many very large fish could be seen during the flight off the Kathiawar Coast.

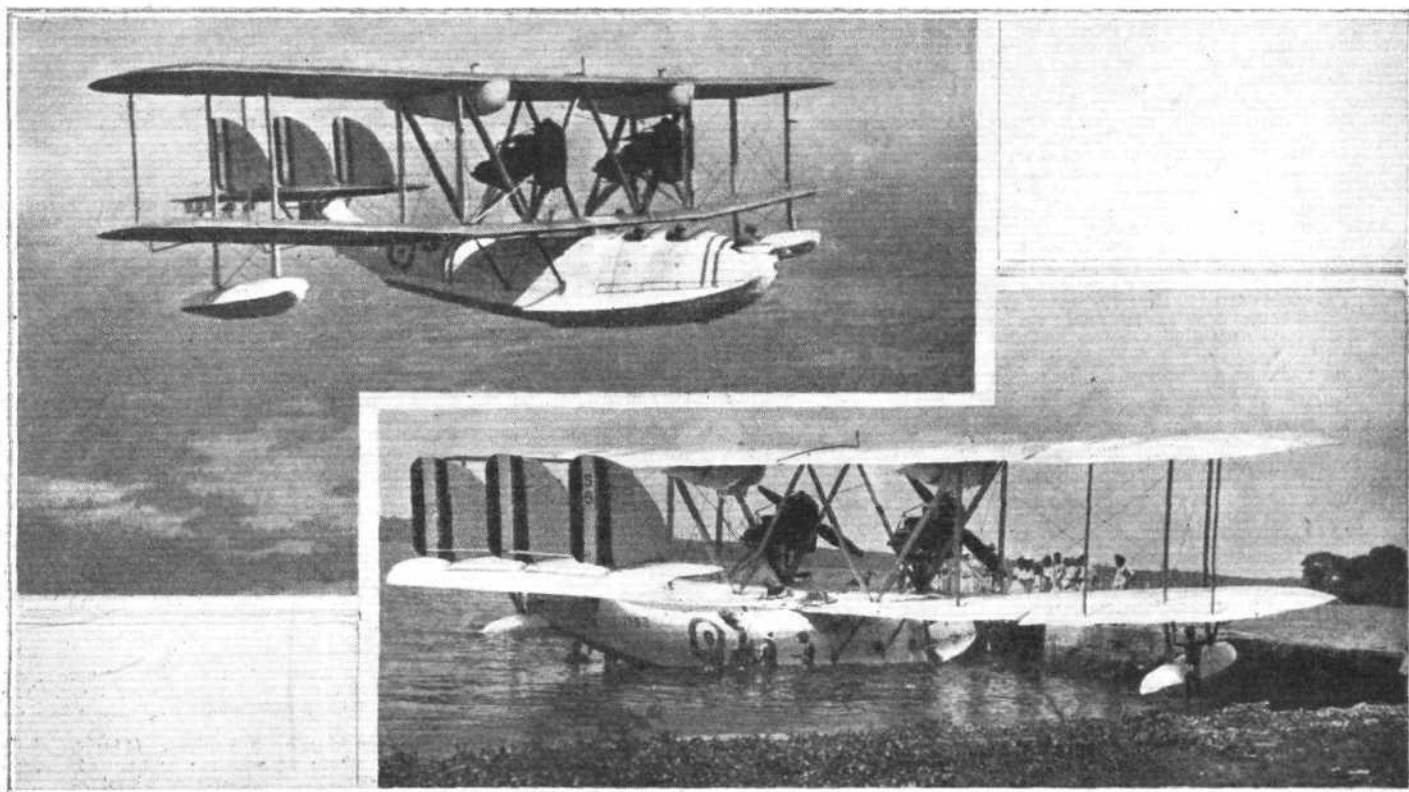
Friday, December 16 to Monday, December 26. Bombay.—Arrangements were made with the Royal Indian Marine for the loan of skiffs for communication between flying-boats and the shore, and for a guard to keep the harbour traffic clear of the flying-boats. On December 17, the Flight formed an aerial escort for the departure from Bombay of His Excellency, the Amir of Afghanistan.

On December 19, His Excellency the Governor and his A.D.C. went for a flight over Bombay in S. 1152. The Flight refuelled to 400 gallons each on December 19, taxiing and securing to the stern of the fuel lighter, which was anchored close to the aircraft moorings.

On the night of the 26th, all officers and airmen slept in the flying-boats in readiness for the flight on the following morning.

Tuesday, December 27. Bombay—Mangalore. 295 miles. (5 hrs. 45 mins.; 68 knots.)—The Flight slipped at 07.20, took off in formation at 07.30 in a N.E. wind of 5 m.p.h., and left for Mangalore. At the request of the Director, Royal Indian Marine, the Flight opened out and searched near Janjira for any signs of the wreck of the "Jayanti," a small coasting steamer of the Bombay Steam Navigation Co., which had been sunk in this area, with all hands, by a cyclone on November 12, and which could not be located. The water was muddy, and nothing was seen of the wreck: this was reported to the Director, Royal Indian Marine and the Bombay Steam Navigation Co., who replied, thanking the Flight for the trouble taken.

The Flight reached Mangalore without incident and landed there at 13.15, securing to buoys laid off the Customs House. The Southamptons were the first aircraft to be seen here, and large numbers of visitors, both European



THE R.A.F. Far East Flight: Above—one of the Supermarine-Napier flying-boats flying over the land between Akyab and Rangoon. Below—Scraping barnacles off the hull of one of the flying-boats at Trincomali, Ceylon.

and Native, had come in from the surrounding districts to see the Flight arrive. The whole shore and the quay were packed with natives, who remained watching the flying-boats until long after dark, and were there again by daylight the following morning.

Wednesday, December 28. At Mangalore.—Many residents, both European and Indian, visited the flying-boats during the day. It was a fine, clear day, and the noon conditions were, wind, W., 5 m.p.h.; temperatures, strut, 81° F., hull, 82° F.; sky, clear. The crowds on shore remained watching the boats all day.

Thursday, December 29. Mangalore—Cochin. 195 miles. (3 hrs. 15 mins.; 60 knots.)—At 11.00, the Flight took off in succession, each boat remaining at its buoy until the boat before it was in the air; this was necessary, owing to the smallness of the area with a sufficient depth of water. The water-front was crowded; the whole population of the district appeared to have come down to see the Flight leave, and they shouted and cheered as each boat took off. After picking up formation and circling Mangalore, the Flight set course down the coast, circling Calicut at 13.00, and landing in formation at Cochin at 14.15. As the Flight were the first aircraft to visit this coast, the Port Officer, Mangalore, had informed the authorities of the towns on the route of the approximate times the Flight would pass over, and the beaches near the towns and villages were crowded. The coast was very picturesque, with many rivers, lagoons and backwaters, which appeared from the air to be very suitable for emergency landings if the depth of water is adequate. On arrival at Cochin, the Flight secured to buoys in the harbour about one-quarter mile N.E. of the town.

Friday, December 30. Cochin.—The Flight, being the first aircraft to be seen at Cochin, aroused the greatest interest; crowded boats of all descriptions were continually passing round the area reserved for the flying-boats, and crowds watched the aircraft all day from the shores of the harbour; even the water-front of Ernakulam, the native capital of Cochin, which is 14 miles from the flying-boat moorings, was crowded with people, although they had been told that the Flight would not leave until 09.00 on the following day. The weather conditions at noon were: Wind variable and under 5 m.p.h.; sky, 0-2 clouded; temperature, 80° F. strut; 83° F. hull.

Saturday, December 31. Cochin to Colombo. 315 miles. (4 hrs. 30 mins.; 39 knots.)—The weather was fine and clear with light detached clouds to the S.E. and a N.E. wind of 5 m.p.h. The hull and strut temperatures were 78° F. The Flight slipped together and took off in formation at 09.00 in 35 secs. After circling Cochin and Ernakulam the Flight left for Colombo, circling in close formation over Alleppi, Quilon and Trivandrum and dropping a message of greeting to the residents of Quilon in accordance with requests which had been received. Throughout this part of the route the Flight appeared to arouse great interest; the beaches and open spaces near the towns and villages being crowded.

As Cap Cormorin was approached, the weather became overcast and the wind increased to about 20 knots from the N.E., raising a nasty sea in the Gulf of Manaar, which moderated near Colombo. The Flight landed in succession in Colombo Harbour at 13.30 near the S.W. arm of the breakwater, and secured to four buoys which had been specially laid near the northern end.

1928. Sunday, January 1 to Wednesday, January 11. Colombo.—Many visitors were shown over the flying-boats, including the Master Attendant, the Senior Naval Officer, the Chairman of the Special Commission on Ceylon Reforms, Sir Geoffrey Butler, the Inspector General of Police and many naval and harbour officers.

During the stay at Colombo there were several heavy rain and thunderstorms, mostly in the evening and at night. The average hull temperature at noon was 82° F.

The eight airmen of the flying crews were sent to the Naval Rest Camp at Diyatalawa in two parties, the first from January 3 to 6, and the second from January 7 to 10. This complete change was of great value to the Flight.

Thursday, January 12. Colombo to Trincomali. 290 miles. (4 hrs. 45 mins.; 60 knots.)—The duty officer and all airmen slept on board. Remaining officers on board by 07.00. The weather conditions were dull. Wind, N.E., 10 m.p.h.; sky, half-clouded at 1,000 ft. to 1,500 ft.; hull and strut temperatures, 77° F. A considerable crowd collected on the S.W. arm of the breakwater to see the Flight leave.

The Flight took off in succession at 08.00, the times varying from 45 to 55 secs., being much the worst experienced so far during the cruise, more especially as the fuel load was only 400 gallons in each machine. The long take-off was due primarily to the thick deposits which had formed on the hull bottoms during the stay of 12 days at Colombo. An examination of the hull bottoms during the flight from Cochin to Colombo had shown them to be practically free from growths. The swell in the harbour may have lengthened the get-off a little, but it was not serious and the poor acceleration was noticeable directly the engines were opened out. Whilst S.1150 was taking off, a seagull flew into the starboard airscrew, and its dead body remained jammed at the base of the "V" struts under the engines until the aircraft landed at Trincomali; the metal airscrew was undamaged.

After circling Colombo in formation the Flight left for Trincomali, S.1149 and S.1150 flying round the south of the Island, S.1151 and S.1152 round the north. The former found the clouds very low near Galle, and came down to 20 ft., flying along the edge of the beach for about 10 mins. The clouds then lifted and the aircraft climbed to 500 ft. off Dondra Head, and shortly afterwards a torrential rainstorm was passed through. S.1150 steered out to sea for a mile or two, and thus avoided the centre of what apparently was a small cyclonic storm, but S.1149 in the centre of the storm had a most anxious five minutes. The rain, descending in torrents, almost blinded the pilot, who could not see the water above 20 ft. The whole surface of the sea was covered with swirling foam, and the heavy bumps made the aircraft almost uncontrollable.

The engines dropped revolutions and ran unevenly and the pilot had the greatest difficulty to avoid being forced on to the water, which was too rough for a safe "landing" and "take off." After about 5 minutes the conditions improved, the aircraft regained touch and no further difficulty was experienced although several heavy rain storms were seen, and avoided. When passing the game reservation on the south coast, a number of elephants, buffalo, boar sambar, deer and monkeys were seen. S.1149 and S.1150 landed at Trincomali at 12.45. A number of large lagoons, which appeared from the air to be suitable for seaplanes, were seen on the south and south-east coasts of Ceylon. S.1151 and S.1152, flying north-about, experienced north-east winds up to 20 m.p.h. and occasional light rain on the west coast; they passed over Punerin and followed the water ways across the north of Ceylon and thence down the east coast with an easterly wind of about 20 m.p.h. and a rough sea. The aircraft landed at Trincomali at 12.35 in an interval between the showers.

Friday, January 13, to Wednesday, January 18—Trincomali.—The weather was generally fine but there were several short periods of heavy rain. The hull temperature during the day averaged 80° F. and the wind was generally north-east up to 15 m.p.h. All the flying-boats were taxied in turn to the shallow water (4 to 5 ft.) in front of the naval sick quarters, where there is a smooth sandy bottom, and were secured to the pier there and the shore so that they were just afloat. The officers and airmen of the flight, assisted by three seamen and six coolies, removed the weed and barnacles from the bottoms with hand scrubbing brushes and pieces of wood. The barnacles were firmly fixed to the paint, which generally came away with them, and

as most of the cleaning had to be done with the head under water, it was most exhausting. A rope passed under the boat and worked backwards and forwards above the water line was found very useful for clearing the area near the keel. The time taken to taxi in the boat, secure it, clean the bottom, flight test and secure to the moorings, was about 2½ hours per boat, and the work on the four boats was spread over two days. As far as could be judged by inspection under water and by flying low over observers, practically the whole of the deposits on the bottoms had been removed. The flight tests showed that the average time for take-off with the clean bottoms was 30 secs., compared with the 50 secs. required with the dirty bottoms at Colombo with approximately the same load and weather conditions. This result was confirmed by "get-off" tests of S.1150 immediately before and after cleaning. As a result of the hard work under water, a number of the officers and airmen suffered from ear-ache. This was cured by syringing out the ears.

Thursday, January 19—Trincomali to Pulicat. 325 Miles (5 hrs. 30 mins.; 60 kts.).—Airmen slept on board; all officers on board by 06.00. The morning was fine with a N.E. wind of 5 m.p.h. sky: 0-3 clouded; hull and strut temperatures: 77° F.; barometer: 29.00.

Flight took off in formation at 06.50 in 40 secs. In accordance with requests which had been received from local authorities, the Flight followed the coast, dipped at Muletivu (07.45) and circled in formation over Point Pedro (08.30). Madras was reached at 12.00, and after circling the town twice in formation, a message for His Excellency the Governor was dropped. The Flight landed at Pulicat Lake at 12.20, in an area of adequate depth marked by flags, near the south end of the lake, and secured to the four buoys which had been laid for it. Throughout the flight the wind was approximately N.E. 12 knots, rather more in the Palk Straits and rather less and more easterly farther north. South of Madras the open sea was too rough for a "take-off" in the open to be safe. The flying conditions generally were good with short periods of heavy bumps over the land. The only trouble experienced during the flight was a water leak in the starboard engine of S.1152, due to the failure of the small washer on the rear water connection to the starboard cylinder head. The throttle of the starboard engine was then closed until the flight reached its refuelling base at Pulicat at 12.20. The aircraft lost about 400 ft. during the 20 mins. flight on one engine. On landing, the defect was made good and examination of the engine showed it to be undamaged.

Friday, January 20—Pulicat to Coconada, 300 miles (5 hrs.; 60 kts.).—A fine morning except for a few drops of rain at 06.35; wind: N.E., 10 m.p.h.; hull and strut temperatures: 77° F.; 0-8 clouded; barometer: 29.05; lake, calm.

At 06.45 Flight took off in succession, having warmed the engines through at the moorings. Average "take-off" time: 26 secs. (350 gallons fuel). Throughout the flight the weather was fine with blue sky. A few cumulus clouds about 1,000 ft. were met occasionally, causing bumpy conditions beneath them. The wind was E.N.E. from 8 to 12 knots. The open sea, which had been moderate off Pulicat, gradually reduced to slight at Coconada as the Flight went farther north.

Saturday, January 21, and Sunday, January 22, in Coconada.

The weather was fine, and the hull temperatures during the day averaged 78° F. The wind was composed of the land and sea breezes up to about 10 m.p.h., which, at times, raised sufficient chop in the shallow water of this exposed anchorage to make it advisable to close the scuttles.

Monday, January 23. Coconada to Chilka Lake. 225 Miles. (3 hrs. 45 mins.; 60 knots).—A fine morning with 0-7 cloud; wind: N.E. 5 m.p.h.; barometer: 29.1; hull and strut temperatures: 75° F.

Maj. C. Hodding (Officer Commanding East Coast Battalion, Auxiliary Force) was carried (with the approval of Army Headquarters, Madras) as a passenger on this flight, in S.1151.

The Flight took off in formation in 30 secs., and after circling in Coconada, left for Chilka Lake at 07.00 following the coast the whole way and circling over Vizagapatam, where large new harbour works are in progress. When completed, this port might be suitable for a seaplane base. Several rivers were passed, which appeared to be suitable for emergency landings. After circling the large crowds which had collected near the Rambha Palace, and on the shores of the south end of Chilka Lake, the Flight landed in formation at 10.40. The Flight was welcomed by the Rajah of Khallikote and Atagada, who entertained the Flight most generously during their stay.

The Flight were the first aircraft to be seen in this area, and their visit created great interest. The Rajah of Khallikote had invited a large house party to meet the Flight, including the Rajahs of Nilgire and Mandasa, and the District Officers from the neighbouring districts. Large crowds of Indians had assembled on the shores of the lake, and special trains were run to bring in the residents from the more distant areas. The Rajah gave large luncheon and dinner parties, and after the latter, the villagers of the surrounding villages gave very interesting displays of sword-dancing and their ancient methods of warfare.

Tuesday, January 24, to Thursday, January 26.—Chilka Lake.—The weather during the stay was fine with light land and sea breezes. The day temperature in the hull varied from 77 to 84. On two days there were morning mists on the lake from 06.00 to 08.30, which would have made it dangerous to take-off or land during this period.

S.1149 made a local flight on 26th, carrying the Rajah of Khallikote and the Rajah of Mandasa and his brother as passengers. The native boatmen made large profits by taking parties from the shores of the lake round the flying-boats.

Friday, January 27.—Chilka Lake to Calcutta. 290 Miles (4 hrs. 10 mins.; 70 knots).—A misty morning with no wind. Temperature 74° F.; barometer 20.00. The mist did not clear sufficiently for the flying boats to take off until 07.40; the Flight then slipped, took off in formation, and after circling and dropping a message of thanks at Rambha Palace, left for Calcutta at 07.50. The low clouds and mist slowly cleared with the sun, leaving some detached clouds about 1,000 ft. and a slight haze. The sea was calm and the surface wind light easterly at first, backing to northerly near the Hoogli; the upper wind appeared to be southerly. The coast, which is low lying and has many rivers apparently suitable for emergency landings, was followed to Maipara Point, and the course was then set for the mouth of the Hoogli and thence up-river to Calcutta, which was circled at 11.45.

The Flight landed at Ichapur, on the Hoogli, some 15 miles north of Calcutta, at 12.00 and secured to the buoys which had been laid there about 100 yards from the east bank of the river. The tide was running out at about 3 knots, and the R.I.M. seamen in the skiffs attending the flying-boats found considerable difficulty in bringing their boats alongside the aircraft safely.

Saturday, January 28 to Thursday, February 2. Calcutta.—In spite of the distance to Ichapur, His Excellency the Governor and many visitors came out to the flying-boats, and were shown over them. The officers and airmen on duty in the flying-boats found many mosquitoes on board at night.

Friday, February 3. Calcutta to Akyab. 315 miles. (4 hrs. 30 mins.; 70 knots).—A fine morning with no wind; slight mist; hull and strut temperatures: 65° F.; barometer: 29.1; tide running out at 2 knots.

Colonel Sheldermine, Director of Civil Aviation, India, embarked in S.1151 at 06.30 for flight to Akyab, and Rangoon, in connection with the proposed Civil Air Route.

Flight slipped at 06.45, and whilst taxiing slowly S.1151 touched a sand bank near the centre of the river about half a mile below the mooring site;

this caused no damage. The Flight took off in formation at 07.05, and after circling Calcutta in formation at 07.25, flew on a compass course over the Sundarbans to Shahpuri Island, and thence down the coast of Akyab. The Delta is jungle, swamp and small paddy fields, with many rivers and creeks where a seaplane could land, but with no landing place for a landplane. Flight landed in formation at Akyab at 11.35.

Saturday, February 4, and Sunday, February 5. Akyab.—The weather was fine and calm; cool at nights with hull temperatures up to 85° F. by day. All airmen slept on board on Sunday night.

Monday, February 6. Akyab to Rangoon. 320 miles. (4 hrs. 10 mins.; 76 knots.)—Lieut.-Colonel Sheldermine, Director of Civil Aviation in India, took passage in S. 1151. A fine, but misty morning; wind, N.N.W., 3 m.p.h.; strut and hull temperatures, 70° F.; barometer, 29.00.

The Flight took off in formation in from 35 to 40 seconds at 07.00, and were clear of the mist at 800 ft. The mist was lying over the land from about 2 miles north to 20 miles south of Akyab. It was clear over the sea, but sufficiently thick over the land to shut out all sight of the ground except for occasional small patches. At first the flight flew some miles to seaward to keep clear of the mist. Afterwards, following the coast, which was mostly picturesque, rugged and well wooded, with many rivers and bays which appeared suitable for emergency landing places.

At 09.55 the Flight turned inland near Broken Point and steered direct to Rangoon; for the first 20 miles the creeks and rivers were small, but afterwards there were many stretches of water which appeared suitable for landing. After circling Rangoon in formation, the Flight landed in succession off Monkey Point at 11.10, and secured to buoys in the creek there, just above the pier by the Air Survey Co.'s slipway.

Tuesday, February 7, to Sunday, February 12. Rangoon.—The weather was fine, with heavy morning mists on several days, which persisted up to about 09.30. Light northerly winds prevailed, and it was hot, the maximum hull temperatures being 90° F. The maximum tide was about 4 knots.

The visit of the Flight aroused a great deal of interest, and large numbers of visitors were shown over the flying-boats. All officers and airmen slept in the flying-boats on Sunday night.

Monday, February 13. Rangoon to Mergui, 310 miles. (4 hrs. 15 mins.; 73 knots.)—A fine morning with slight haze; wind, north, 5 m.p.h. hull and strut temperatures: 71° F.; no clouds; tide, 2 knots. Officer Commanding Troops and many others came down to Monkey Point to see the start.

The Flight slipped at 06.40, taxied out of the creek, took off in formation at 07.00, and after circling Rangoon, left for Mergui. S. 1151 reported taking in water during the "take-off"; this was found to be due to the lid of the lavatory not having been fastened sufficiently tightly; this was rectified, and the water cleared out in flight.

The conditions during the flight were fine, but hazy, and the wind northerly, increasing to 10 knots in the Gulf of Martaban. The course followed from Rangoon was down the Rangoon River to Elephant Point; thence across the Gulf of Martaban to the mouth of the YE river and down the coast, turning eastward to pass over Tavoy, which was circled at 1,000, and down the Tavoy river and the coast to Mergui, where the Flight landed at 11.15, and secured to buoys laid near the east shore of Pataw Island and opposite Mergui Town. The coast lines and the Mergui Archipelago contain many places for emergency landings in seaplanes.

Tuesday, February 14, and Wednesday, February 15—Mergui. The weather was fine, although thunderstorms appeared to be threatening in the evenings. The sea was calm with an occasional slight swell at the moorings. The conditions, both on shore where there was no electric light or fans, and on the flying-boats were rather hot and sticky; the hull temperatures in the middle of the day rising to 95° F. The wind was mainly land and sea breezes up to 10 m.p.h. and the maximum tide at the moorings about 1 kt. At night, considerable numbers of mosquitoes came out to the flying-boats from the shore. All officers and airmen slept on board on Wednesday night.

Thursday, February 16, Mergui-Penang. 475 Miles. (6 hrs. 25 mins. 74 knots.)—A fine morning with no wind; 0.3 cloud; hull temperature: 78; strut temperature: 75; barometer, 28.95; tide: ½ kt.

Took off in formation in 60 secs. (450 gallons) at 07.00 and circled Mergui. The connecting strut between centre and starboard rudder of S.1150 was seen to be disconnected from centre rudder and S.1150 was ordered to land immediately; this she did, followed by remainder of flight at 07.10; all aircraft picked up their original buoys. The defect in S.1150, which did not affect the control or flying in any way, was found to be due to the breakage of the eyebolt, in the centre rudder, which carries the connecting rod to the starboard rudder. This was temporarily repaired by substituting for the broken eyebolt a tommy bar suitably bent and drilled. A short test flight showed that the repair was satisfactory.

The Flight took off again at 09.00 in 50 secs. and left for Penang. Victoria Point was passed at 11.00, and after circling Penang, the Flight landed in formation at 15.25, and secured to buoys which had been laid off the Harbour Master's Pier at Glugor, about three miles south of George Town, Penang. The weather during the flight was fine except for slight drizzle, which started when over Penang; the sky then looked very threatening to the eastward. The winds were light, variable and northerly; there was a small amount of detached cloud and a slight haze. The route was dotted with picturesque, wooded islands, many of which would afford shelter in emergency, but might be of some danger to aircraft flying low in heavy rain or bad visibility. At the time of the flight the sea was calm and flying-boats could have landed or taken off anywhere.

Refuelling to 250 gallons was started as soon as the flying-boats had moored up, sampans being used to bring the barrels from the lighter to the flying-boats. By the time two boats had refuelled the thunderstorm, which had been seen in the distance before landing, broke over Penang with a heavy downpour of rain and a wind which made it impossible to get the sampans with the fuel from the lighter to the flying-boats. As this continued till dark, the remainder of the refuelling was postponed till the next day, and officers and airmen off duty went ashore as soon as the weather permitted.

Friday, February 17, to Wednesday, February 22—Penang. The weather was generally overcast; light rain fell nearly all one night and there were several showers during the days, but there were no more heavy storms. It was rather hot and sticky, except immediately after rain; the hull temperatures varied from 78° F. at night to 92° F. during the day. The wind was light and variable.

The visit of the Flight to Penang aroused a great deal of interest, and many residents came out to Glugor and were shown over the flying-boats.

Thursday, February 23, Penang to Port Swettenham, 160 miles* (2 hrs. 20 mins.; 68 kts.)—A fine, but dull morning; wind N.E., 1 m.p.h.; hull and strut temperatures: 81° F.; barometer: 29.00; sky: 0.9 cloud; tide, ½ kt.

At the request of the Officer Commanding Penang and Port Wellesley Volunteers, the Adjutant Capt. Prattley (Norfolk Regiment), who was proceeding from Penang to Kuala Lumpur on duty, was carried as a passenger in S.1150. The Flight took off in formation in 25 to 30 secs. (250 gallons) at 09.00, and flew down the coast in fine weather, with detached clouds for the first hour, after which the clouds were continuous at 1000 ft. or lower, and there were occasional rain squalls. Down to, and including Pangkor, there appeared to be many places suitable for emergency landings for seaplanes in bad weather, but farther south it was not so favourable. The Flight landed in formation at Port Swettenham at 11.20 and secured to buoys laid in a well-sheltered position.

Friday, February 24, to Monday, February 27—Port Swettenham. At the request of His Excellency, the Governor of the Straits Settlements, the flight to Singapore was postponed from February 27 to February 28, to enable him and his staff to fly down with the Flight. The Air Ministry and Singapore were informed of the change of programme.

The weather was fine, except for one shower, but frequently overcast, and it was hot and sticky, both in the boats (up to 90° F.) and on shore. The winds were light and variable, and the tide ran up to 2 kts. at the moorings.

Tuesday, February 28. Port Swettenham to Singapore, 210 miles. (2 hrs. 30 mins.; 84 kts.)—A fine morning. The noon conditions were: Wind N.W., 3 m.p.h.; clouds: 0.5; barometer: 29.00; hull and strut temperatures: 92° F.

His Excellency the Governor of the Straits Settlements (Sir Hugh Clifford) and his staff, arrived at Port Swettenham at 14.20, and were accommodated in different flying-boats. The Flight took off in formation at 14.35 and flew down the coast to Singapore. The wind was north-westerly, 10 to 15 kts., and the sky overcast for the majority of the flight. It was rather bumpy over the land, but smooth over the sea. As the Flight flew south the weather became thundery with bad atmospheric, and several heavy rainstorms were seen in the neighbourhood of Johore Straits. The Flight ran into light rain over Singapore Town, and landed in formation at 17.05 in moderate rain, off the site of the air base at Seletar, securing to the buoys which had been laid there for them. A large party, including Lady Clifford, the Colonial Secretary, representatives of the General Officer Commanding, and the Senior Naval Officer, had assembled at Seletar to welcome His Excellency the Governor and the Flight. A guard from the base party was put on board the flying-boats for the night and all the flying crews went into Singapore where they were accommodated.

Total distance flown from Karachi—4,600 nautical miles; average flying time per aircraft, 67 hrs. 50 mins.; average ground speed, 66 knots; total local flying at Karachi, 8 hrs. 40 mins.; total local flying time, escorts, etc., during the stage, 5 hrs. 50 mins.

THE ROYAL AIR FORCE

London Gazette, July 31, 1928

General Duties Branch

Lieut. Count Andrea Dudley Richard Metaxa, R.N., is granted a temp. commn. as Flying Officer on attachment for duty with R.A.F.; July 16.

The undermentioned Pilot Officers are promoted to rank of Flying Officer: Cyril Charles Douglas Williams; March 24. John Francis Griffiths (with seniority of June 3, 1927); June 3. Reginald John Drummond Brown; June 11. Malcolm Angus Cowan; July 10. James Douglas Ferrier Bruce and Robert James Pilgrim Morris; July 15. Pilot Officer on probation Alexander Cunningham Pearson is confirmed in rank; Aug. 1.

Group Capt. James Bevan Bowen, O.B.E., is placed on the half-pay list.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Flight Lieutenants: J. W. Turton-Jones, to No. 28 Sqdn., India, 8.7.28. V. Buxton, O.B.E., to R.A.F. Depot, Uxbridge, 11.7.28. G. S. Hodson, A.F.C., to No. 5 Flying Training School, Sealand, 30.7.28. R. C. Savery, D.F.C., S. Graham, M.C., R. J. Rodwell, J. C. Foden, A.F.C., H. F. V. Battle, C. W. Weedon, D. C. Prance and G. C. Shepherd, to Home Aircraft Depot, Henlow, 7.8.28.

Flying Officers: K. C. Netherton, to No. 31 Squadron, India, 4.7.28. F. Boston, F. C. Rowland, T. H. Perry-Keene, T. N. McEvoy, and J. D. Greaves, to Home Aircraft Depot, Henlow, 7.8.28. V. J. Sofiano, to No. 216 Sqdn., Middle East, 17.7.28. H. G. Wisher, to No. 60 Sqdn., India, 23.6.28. E. F. Wain, to No. 5 Sqdn., India, 23.6.28.

Pilot Officer J. R. Mathews, to No. 27 Sqdn., India, 13.6.28.

scale B; Feb. 6 to 13 inclusive. Lieut.-Comdr. Edward John Shirley Knocker, R.N., Flight Lieut., R.A.F., ceases to be attached to the R.A.F. on return to naval duty; July 25. The short service commn. of Pilot Officer on probation Oswald Vernon Garratt is terminated on cessation of duty; Aug. 1.

Flying Officer Frederick Leslie Lawrence is dismissed the service by sentence of General Court-Martial; July 25.

Memorandum

Sqdn.-Ldr. Gerald Graham Adeley is granted permission to retain the rank of Major on retirement from the Army; Mar. 24.

Accountant Branch

Pilot Officers: M. L. Jones, to Elec. and Wireless Sch., Flowerdown, 25.7.28. T. C. Reep, to No. 1 Sch. of Tech. Training (Apprentices), Halton, 25.7.28. C. V. Mears, to R.A.F. Depot, Uxbridge, 25.7.28. R. Trippett, to No. 5 Flying Training Sch., Sealand, 25.7.28.

Medical Branch

Flying Officer G. W. McAleer, to C. & M. Party, Basrah, 13.7.28. **Flying Officer (Q. Mstr. Medical)** F. W. Goodread, to H.Q., Iraq, 13.7.28.

NAVAL APPOINTMENTS

The following appointments were made by the Admiralty on August 1:—**Lieut.** (Flying Officer, R.A.F.)—F. W. Bourne, to *Eagle*, and for full flying duties in 402 Flight (undated); and E. H. Shattock, to *Eagle*. **Sub-Lieut.** (Flying Officer, R.A.F.)—O. S. Stevenson, to *Eagle* (undated).

THE INTERNATIONAL AIR TRAFFIC ASSOCIATION

In his speech of welcome at the Air Council luncheon to the International Air Traffic Association at the Savoy Hotel on August 2, Sir Philip Sassoon said: The importance of the work which the Association was doing, always great, had grown steadily year by year, as air communications between the different nations had multiplied. The Association had been in existence less than a decade; yet in that short period the progress made by air transport had been vast, and the end of that progress was not yet even in sight.

To all who gave any attention to the affairs of civil aviation the value of the work they were doing was self-evident. Its value was proved, were proof needed, by the increase in the number of companies that had joined the Association and by the number of different countries which were represented on it. It was a source of much gratification to him to know that our present Director of Civil Aviation was among those responsible for the formation of so useful an international organisation, and he liked to think that the part he then took was symptomatic of the interest which we in this country took in the work upon which the Association was engaged.

If he and those who were associated with him in bringing this organisation into being ever looked back to the days of its formation, they must surely congratulate themselves, and they most assuredly deserved to be congratulated upon the foresight and public spirit they displayed. Those six operating companies who first comprised the membership of this Association were rendering a service when they came together, not only to themselves but to civilisation. They were bringing the day nearer when the power of mechanical flight would be seen in its true colours, not as a new method of warfare, but as a most potent instrument of peace, a powerful agent for promoting the comity of nations and increasing the prosperity and happiness of mankind at large.

That, perhaps, was still looking some way into the future.

But one did not need to look into the future to appreciate the usefulness of this Association. To do that, one had only to look at the results of previous meetings, and to study the items which were tabled for discussion at this present meeting.

Their programme was essentially a practical one, like all the work of their Association. It was concerned with questions of a technical nature and technical problems had a way of being difficult. But there was no better way of finding a solution for any problem than free and friendly discussion between those concerned. They had, too, in the primary objects of their Association the key which would open all barriers, the establishment of unity in the exploitation of air lines.

The more general became the use of air communications, the more essential became uniformity of practice and method on the part of the principal air lines. Lack of uniformity was not merely a hindrance and handicap in the development of existing lines; it was a bar to the increased use of the air as a channel of communication by the general public in our several countries.

They had notable instances of that fact in the three principal subjects which they were shortly to discuss—those dealing with the method of charging post offices for the carriage of air mails, the responsibility of carriers by air, and the improvement of mutual arrangements between air lines and railways. An agreed solution of each of those problems was going to be of direct benefit to all members of the general public who availed themselves of the advantages which air transport could offer. For that reason, an agreed solution was going to add materially to the popularity of air transport.

On August 3 a party of the Association paid a visit to the Short all-metal "Calcutta" flying-boat, which was moored in the Thames off the Houses of Parliament.

PERSONALS

Married

The marriage took place quietly on July 25, at Holy Trinity, Sloane Street, of Sqn.-Ldr. A. E. BARR-SIM, son of the late Mr. William Barr-Sim, and of Mrs. Barr-Sim, of Sylston, Stonehaven, to Mrs. KEMP, daughter of the late Col. E. B. SNOW, and of Mrs. SNOW, of 9, Cliveden Place, S.W. Flight-Lieut. J. D. Hardman was best man.

To be Married

The engagement is announced between W. J. MARTIN TOMSON, late R.A.F., only son of the late Mr. Martin J. R. Tomson, J.P., C.C., and Mrs. Martin Tomson, of Court Stairs, St. Laurence-in-Thames, and DELPHINE AUGUSTIN, youngest daughter of Mr. and Mrs. GEORGE PARMLEY TOBY, of New York, U.S.A.

IN PARLIAMENT

German Air Routes

SIR S. HOARE, on July 26, in reply to Mr. Malone, said: the mileage of internal civil air routes in Germany was approximately 13,500. No comparable figure could be quoted for Great Britain. British civil air routes had tended, for geographical and other reasons, to develop in a different manner from those of Germany, and were all to places outside Great Britain.

Lord Apsley: Is the right hon. Gentleman aware that one of the reasons of the success of the air route in Germany might possibly be the fact that they have aerodromes in almost all their big towns, and has the right hon. Gentleman no money to develop projects of this kind?

SIR S. HOARE: I should be very glad if hon. Members, including the Member for Central Hull (Lieut.-Commander Kenworthy), would use their influence with the municipalities with which they are connected.

Lieut.-Commander KENWORTHY: Is the right hon. Gentleman aware that at Hull we have a natural floating aerodrome for seaplanes?

Colonel Woodcock: Is the right hon. Gentleman in communication with the municipalities of Great Britain?

SIR S. HOARE: Yes, we are always trying to do what we can to encourage municipalities to organise aerodromes.

R.A.F. Aircraft Apprentices

The results of the Limited Competition for the entry of Aircraft Apprentices, R.A.F., the examination for which was held on June 5, have just been published by the Air Ministry. The lists include the names of the candidates, together with their respective schools and nominating authorities. In List I, 553 candidates were declared successful, and List II contains the names of 36 candidates who passed the examination but were unsuccessful. List III gives the names of 29 candidates accepted for entry as aircraft apprentices on the results of the Civil Service Commission Examination who have passed also in the Limited Competition (Air Ministry Examination).

Air Mail to Holland

The Postmaster-General announces that an additional letter air mail for Holland is now being despatched from London every afternoon. Latest time of posting at the General Post Office (chief office counter), 3.15 p.m. Letters sent by this service should be included in the first delivery in Holland on the following morning.

PUBLICATIONS RECEIVED

League of Nations Armaments Year Book. Fourth Year, 1927-1928. League of Nations, Information Section, Geneva.
Report on the Progress of Civil Aviation, 1927. H.M. Stationery Office, Kingsway, London, W.C.2. Price 3s. net.

AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

APPLIED FOR IN 1927

Published August 9, 1928

- 1,617. VICKERS, LTD., and H. J. PAYN. Automatic guns carried by aircraft. (293,493.)
- 9,474. BRISTOL AEROPLANE CO. LTD. (A. H. R. FEDDEN). Gearing for driving a rotary compressor on an i.c. engine. (293,713.)
- 9,706. DE HAVILLAND AIRCRAFT CO., LTD., and A. E. HAGG. Means for actuating control surfaces in aircraft. (293,715.)
- 10,203. H. R. RICARDO. Fuel pumps. (293,820.)
- 12,099. R. P. PESCARA. Sustaining helices for aircraft. (293,932.)
- 17,076. A. V. ROE AND CO., LTD., and C. B. REDRUP. Radial cylinder i.c. engines. (293,968.)
- 34,693. F. I. BENNETT and H. G. HAWKER ENGINEERING CO., LTD. Engine mountings. (294,054.)

APPLIED FOR IN 1928

Published August 9, 1928

- 698. J. O. GRENIER. Straining devices for ropes, wires, etc. (294,067.)

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